CHICAGO SCHOOLS JOURNAL

The Teacher's Purpose
Science Weaknesses
A New Research Project
Counseling Students

May-June, 1957

CHICAGO SCHOOLS JOURNAL

An Educational Magazine for Chicago Teachers

Edited at the Chicago Teachers College, 6800 Stewart Avenue, Chicago 21, Illinois

PUBLISHED
BY THE
BOARD OF EDUCATION

R. SARGENT SHRIVER, JR.
President

BENJAMIN C. WILLIS
General Superintendent of Schools

ALFRED E. BOLT
EDWIN A. LEDERER
THADDEUS J. LUBERA
DON C. ROGERS
JAMES H. SMITH
Associate Superintendents

EDITORIAL STAFF

RAYMOND M. COOK
Editor

IRWIN J. SULOWAY
Managing Editor

GEORGE J. STEINER
News

JOHN M. BECK
Periodicals

JOSEPH J. URBANCEK
Teaching Aids

LOUISE M. JACOBS
Books

COLEMAN HEWITT
Art

ELIZABETH H. MANS
Secretary

Printed and bound under the direction of
MICHAEL A. KENNETH

BOARD OF EDUCATION PRESS

Contents

Volume XXXVIII, Nos. 9-10 May-June, 1957

What Is the Teacher For? 257
Earl S. Johnson

Why Johnny Can't Become a Scientist 265
Edward J. Uber

Washington and Chicago Cooperate in Research 272
Frances A. Mullen

Counseling and Guidance In the Classroom 277
Emma Fleer Muller, Marie Tierney, Oscar Walchirk, and William Watson

Tips for Teachers 282

News In Education 284
Edited by George J. Steiner

Periodicals 287
Edited by John M. Beck

New Teaching Aids 291
Edited by Joseph J. Urbancek

Important New Books 294
Edited by Louise M. Jacobs

Index for Volume XXXVIII 300

The Chicago Schools Journal is published bimonthly during the school year. Distributed free to Chicago Public School personnel. Single copies to others, 25 cents. Unless otherwise indicated, articles represent the views of the writers and are not expressions of the official policy of the Chicago Public Schools. Manuscripts and all communications should be addressed to the Managing Editor at 6800 Stewart Avenue, Chicago 21, Illinois. Telephone, ABerdeen 4-3900.

What Is the Teacher For?

The Teacher's Role As Priest and Prophet

● *Earl S. Johnson*

The question asked in my title is far from being rhetorical. It is meant to elicit a discussion, to provoke an inquiry. In this article I propose to suggest at least the terms of such a discussion—the outlines of an inquiry.

The supreme task of teaching in a democracy is the making of the democratic character. This is the end which includes and transcends all specific learning.

My use of the term "making" intends to give no comfort to an assembly line conception of teaching. The kind of teaching I have in mind is not a matter of technique in which a teacher, conceived of as an active agent, "does something" to a student, conceived of as a passive agent. It presumes that there are democratic characters in our society who wish to see the preservation and advance of democracy and who wish to give opportunity for other democratic characters to arise who will, in turn, make for the further preservation and advance of democracy for tomorrow, and tomorrow, and tomorrow.

The World and The Students' Character

My kind of teaching presumes, as means, an experience in communication in which the teacher helps the student become the architect of his character. This is done through helping him effect a wise and good transaction between his inner environment (his capacities and talents) and the outer environment (his knowledge of things past and things present). Through this transaction he may be enabled to understand the nature of the present and help determine the nature of his own and his culture's future.

In order for the student to know what is *in* him he must know a great deal of what is *outside* him: the world of man and nature. It is tragic that teaching is much concerned with what is around us but makes little effort to relate what is around us to what is inside us. The only justification for gathering knowledge of what is around us is that what is around us affects

Here is a challenging conception of the role of the teacher in a democracy. Mr. Johnson, Professor of the Social Sciences at the University of Chicago, strongly believes in the dignity of man and in man's ability to make a better world. In this article, adapted from an address delivered by Professor Johnson at the January 1957 commencement at the South Campus of Chicago Teachers College, he delineates what such beliefs can and should mean to the teacher.

what is inside us. Only if the outside is clearly related to the inside may our students realize the truth which lies in Plato's injunction, "Know thyself."

We can aid this transaction between inner and outer environment by helping our students settle some issue, relieve some anxiety, fulfill some desire, and satisfy some curiosity. We must help them, that is, to achieve a workable mastery of their own minds and purposes. This goal, always moving and never final, requires that the teacher help his students translate knowledge into right conduct, which is the product of goodness and wisdom. The thing to do with an idea is "to prove it—that is, prove its worth." Knowledge is not given by the teacher to be given back. It is to be lived by.

The Democratic Character—Disciplined Individuality

The conception of character to which I hold I owe to William James and Thomas Jefferson. In his *Talks to Teachers,* James wrote that "your task is to build up a *character* in your students, and a character. . . . consists in an organized set of habits of reaction." James seemed to be saying that if people do not act characteristically, that is, on the basis of an organized set of habits of reaction, they act whimsically, capriciously, unreliably. These habits discipline us *not* to act, as well as to act. *When* to do, *which* is, of course, a moral issue; for, as James put it, "to hold fast to an idea" is the essence of the moral act.

Implicit, I believe, in James' view, is the conception of character which I owe to Thomas Jefferson; that character consists of moral and intellectual individuality. When Jefferson spoke of *equality* he meant equal opportunity of access to the moral and intellectual goods of life.

But both James' and Jefferson's ideas of character, or individuality, have undergone a degradation. Too many have interpreted them to mean the interchangeability of every man for every other. This actually is a denial of the concept of individuality, which presupposes *differences* between men. If every man were interchangeable with every other man, it would make no difference to him whether he were himself or someone else. In that event he would be indifferent to his character. Indeed he would be without character.

The individuality of which I speak and which I take to be the moral and intellectual goal of teaching not only permits but requires that each of us to be peculiarly and uniquely himself. It demands, of each of us, a distinctive and somewhat specialized interpretation and expression of a common fund of knowledge and ideals. It demands, above all things, that the teacher help young people to become decently different, not monotonously alike. This requires an effective regard for whatever is distinctive and unique in each student, irrespective of physical or psychological inequalities, or of advantaged or disadvantaged social, racial, or ethnic place in the community of men.

How the Democratic Character Is Developed

The bench marks by which the teacher works at this task are the Great Oughts, the great imperatives of the democratic faith. These are such concepts as justice, love of truth,

reasonable persuasion, human dignity, mutual respect, neighborliness, the brotherhood of all men, material well-being, peace — the list is endless. These and many more are the points on the compass by which both teacher and student set their course. The essence of all these concepts is belief in the capacity of man to achieve the democratic character by rational and humane means. It is these heart-ideas of democracy of which the teacher is trustee. This trusteeship he strives to bring his student to accept and to share.

The enemies of the democratic faith are three: ignorance, muddleheadedness, and moral crassness. The moral and intellectual weapons by which the teacher may defeat these enemies are: reliable knowledge; the rational and self-repairing method of inquiry by which this knowledge becomes reliable; and awareness of and boundless imagination about the Great Oughts, the great imperatives to which I have referred.

The final point at which these means to moral and intellectual individuality must meet is in the character of the student. Through this meeting the integrity of his character is achieved; he develops a good and a wise self. What a pity it is that some in our profession believe that the final point lies in the curriculum or the textbook. For the teacher, to believe this is to practice the original pedagogical sin.

The Democratic Character Combines Knowledge and Virtue

Among the problems which are suggested in these observations there is one which, above all others, ought not to go unidentified. This is the problem of the relation of knowledge to virtue, or of wisdom to goodness. I shall not argue that knowledge is (but it is!) virtue; I shall only set before you the view that never in the history of man has knowledge been more necessary for the discovery of what the good is. This is not to suggest that if our students are full of knowledge they will be full of virtue. It is only to suggest that the complex choices which students face in our time cannot rest for their making on chance and accident.

Faith will, of course, always be a mighty factor, and I do not counsel its abandonment. I ask only that teachers distinguish between its rational and irrational varieties and, to the degree which the growth of knowledge makes possible, dedicate themselves to increased reliance on the rational variety.

On this point, I share Professor William E. Hocking's belief that "the new conscience is finding its courage because man's soul is recovering the sight of both its eyes. It is taking the scientific conscience into the house, not as master but as partner." Thus the wise and the good, thinking and loving — the components of the democratic character — are joined.

The Mind and Spirit Of the Teacher

And now, what about the teacher who is committed to the view which I have set forth? What manner of mind and spirit does he represent? The teacher who aims at developing the democratic character is a first-rate human being — a good exponent of his culture. He knows that he cannot be impartial but that he can be sincere. Sensing this distinction, the teacher knows that he cannot avoid communicating himself — and he does so by

From *Psychology and Teaching* by Morse and Wingo: Copyright 1955 by Scott, Foresman and Company

far more than words. He knows the difference between avoidable and unavoidable indoctrination; he practices the latter. (The former is, of course, sheer propaganda.) He governs — in the degree to which governance is involved — by influence, not by edict.

Such a teacher has the capacity to enter into the life experience of his students but without capitulating to their values, a talent which is indispensable to true communication. He knows his students — their experiences and their language. This is a knowing which permits and requires caring for them, that kind of caring which begets responsibility for them. This is the responsibility of the *teacher,* not the watchman or the hired man.

He has the skill, the insight, and the courage of the *leader* — one who is able to take in more than others of an experience in which he engages, jointly, with his students. By this talent he makes the community of the classroom a different one—enlarged and enriched.

He is intellectually and emotionally competent. He is articulate. He is willing not only to countenance but to encourage critical and reasoned dissent. The teacher's knowledge is certain, broad, and related. He loves his craft and, loving it, protects it by being both accurate and interesting. He is patient, since he knows that patience is an expression of courtesy and friendliness.

He abhors dullness, not only because it makes him a dull fellow, but because his dullness will, almost certainly, rub off on the materials which he teaches. He is proud to exhibit not only enthusiasm but even passion for his material. He subscribes to the first as well as the second of the terms in Chaucer's classic description, "gladly wolde he lerne, and gladly teach." He seeks to learn from his students as well as from his books.

His resources are drawn from within as well as from without; (from within, as "party to the thing;" from without, through observation.) He stands by his students, not over them. He is not shocked if his students sometimes display anger. It were better for them that they "out with it" than suppress it. If he does not, on occasion, display some anger, he is a rare human being. He does not din "democracy" into his student's ears, for it is a way of life — an ethical system, not a whip.

To Counsel and Advise, Not To Guide

Closely associated with his role as teacher, indeed as an inescapable component of it, is his obligation to counsel and advise. If this be called "to guide" I must object. My objection is based on the belief that much so-called guidance is not guidance at all. That is, it is not what it ought to be, counsel and advice. It is not, as I view it, the teacher's obligation to tell the student what he *ought* to do, however well-intentioned that telling may be. Much so-called guidance is of this species. Nor is it the teacher's obligation, or *right,* to "fix the student up" by cajoling, threatening, or begging him to conform. His task is to inform him, that is, inform him of the alternatives which he faces and of which he is most likely, quite unaware. This means to teach him both how to choose and what consequences most likely will follow from alternative choices. The teacher's obligation is, then, one or the other of the following: on the affirmative side, to give the student the occasion to face alternatives and give him the knowledge by which he may resolve them; or, on the negative side, to cease from interfering with his disposition and tendency to consider alternatives.

I mean to say that the teacher of my image does not command, for commandments anticipate only blind allegiance, neither respect nor loyalty. Neither does he exhort his students, for he knows that exhortation takes for granted the very virtues and capacities which they do not possess: perspective, knowledge, and a disciplined self. Neither does the teacher seduce his students by subtleties and wiles which are but undercover forms of tyranny. He is, then, continually aware of the potential tyranny of both himself and "the book" — the tyranny of unquestionable authority—immunity from criticism.

He seeks, in Whitehead's insightful terms, "to create the environment of a larger knowledge and a firmer purpose." He seeks, also, to widen and deepen the sensitiveness of his students to the end that they may cope with a difficult subject and a difficult world in wiser and better ways.

He seeks, moreover, to make no one his disciple or mold anyone in his own image. In short, he practices the caution which Emerson gave us, "Don't make the student another you; one's enough."

The Art of Teaching

The maker of the democratic character conceives of teaching, as Paul Klapper puts it, as a "gentle art," that is, without histrionics, but not without dynamics and dedication. He understands that teaching is really teaching-learning. Like a marriage, it takes two to make it go. He knows that this is a cooperative and reciprocal relation, but

a relation between unequals. This inequality is due to his superiority and the inferiority of his students. His continual and abiding purpose is to reduce this inequality, if not indeed to abolish it.

He knows that his art involves much more than the *how* of it. He knows that the *how* is informed and conditioned by the *why*, the *what*, and the *to whom* of it. He understands that to know psychology is absolutely no guarantee that he shall be a good teacher, for it is a science, but teaching is an art.

Although science and art are different, they are not in opposition. The science of psychology may inform his action but it can never create his action for, as William James told us, "sciences never generate arts directly out of themselves." What particular thing he shall do within the boundaries laid down by psychology and the materials of his teaching field must be left exclusively to his genius. The art of teaching issues from "the morality of mind" which is the ultimate achievement of the teacher.

Teaching Is More Than Tricks and Gimmicks

Thus he knows the art of teaching cannot be counterfeited, for the artificial is not the artistic. Furthermore, he knows that pedagogical tricks and gimmicks are not the equivalents of the arts of his craft. They are, unfortunately, often only the borrowed or purchased devices by which the trained but still uneducated teacher seeks to piece-out inadequate knowledge and insight — evidence of a pathetic confusion of imitation with creation.

Moreover, he knows that the practice of a fine art is far from being a mere matter of extemporized inspirations. The methods of the artist in every branch depend upon thorough acquaintance with materials and tools — for the teacher-artist these include his students. The artist also studies the progress of his own attempts to see what succeeds and what fails.

In knowing and appreciating these things he knows that nothing has brought his art into greater disrepute than the belief and practice that it consists in tricks and gimmicks. To be sure, he uses them, but only insofar as they give substance to the theory and philosophy of his craft, in which his aims are found. These aims do not come from the wants and needs of his students as they state them. The aims come from a living picture of the beliefs of dedicated and thoughtful men about what they would have life be and how men may shape their intelligent activities to realize that life. The students' wants and needs, stated or unstated, are, none the less, served.

The Teacher: Priest and Prophet

Every teacher is cast in two roles: the role of the priest and the role of the prophet. At the more elementary levels of the school his role is perhaps exclusively that of priest — to communicate the "received truths and skills" of his culture. But, progressively, as these levels are left behind, his role becomes increasingly that also of prophet — to examine the relevance of the "received truths and skills" to the thought and action of the present.

In his priestly role the teacher is, I suppose, in the best and most accurate

meaning of the term, a soothsayer, that is, a "truth-sayer." In his prophetic role he is examiner and critic. Severe injury to the idealism of his students will certainly follow if he plays the prophetic role before an immature audience. But, just as surely, his failure to play the prophet role at the proper stage of student maturity will leave their critical capacities undiscovered, unchallenged, and undeveloped. His obligation as artist is to play the roles of priest and prophet in proper and helpful balance.

In the final analysis, conviction is the *beliefs* of the culture, criticism is reasoned insight into — and the grounding of — those beliefs. Thus, the teacher recognizes and serves the two great traditions on which his craft is founded: *conviction,* which is the sacred tradition, is his debt to the Hebrews: and criticism, which is the secular tradition, is his debt to the Greeks.

The Task of The Administration

The one indispensable pre-condition for the opportunity of the teacher to be the kind of artist-person I have set forth — granted that the genius is there — is an administration which protects him from any attempts of the community to interfere with him as a teacher. This is an administration capable of strong and courageous leadership, whose task is, distinct from that of the teacher, to educate the civil community.

In conclusion, I should now like to return to the theme of the relation of science and art in order to share with you my conception of the disciplines to which the art of teaching is beholden. These are not disciplines in the sense of being systematic bodies of knowledge. Rather, they are disciplines in the sense of being the ways of the critical and dedicated mind. They are imagination, precision, appreciation, and synthesis.

Imagination

The discipline of imagination, like art itself, stands outside of good and evil — "wholly innocent of ideas derived from praise and blame." It is the child of doubt, that legitimate doubt — not cynicism — which initiates all inquiry, all search for truth. Its task is to spur *suppose.* To suspect or fear it, is to suspect or fear thought itself. To increase its range and set it free is one of the grand purposes of teaching. The lack of it is the great source of our remediable trouble, the absence of a genuinely humane way in which human beings may live in dignity and security.

In teaching, the net of imagination must be cast wide. It must encompass not only those areas which suit the preferences of the teacher but also those which run counter to them. It involves a great risk. But, however great the risk be, the risk which lies in failure of the teacher to provoke bold imagination along new and untried lanes of thought is far greater.

Precision

The discipline of precision requires accurate and honest observation, a readiness to accept evidence though it run counter to what one would like to believe, a willingness to follow wherever the evidence leads. It permits no confusion of fact with preference and employs logic only in the service of clarity of thought. It treats facts,

not as ends in themselves, but as turning points in the growth of the mind. It demands a quality of courage which is unique in the annals of man. No tradition, belief, or practice is excused from its rigors.

Appreciation

By the discipline of appreciation teacher and student come into immediate touch with those values which reason touches only indirectly. Appreciation pertains to what we would *rather* love and *rather* do. It is kin to respect. It is the opposite of indifference. Its expression is manifold: holding dear, respecting, loving, being responsible, and caring.

The discipline of appreciation is the one of which we are most apt to be afraid. But without it teaching can only be clever — never grand or warm. Without it, learning is uninspired. Without it, there is no real profundity. It is the mark of the excellence of the human spirit.

Synthesis

Finally, there is the discipline of synthesis. It is the discipline by which wholes are created: the discipline which joins thought to action. Its use reports itself in balanced perspective which calls for discrimination among beliefs. It encourages mobility of mind and spirit rather than the "fixed man for fixed duties" of Whitehead's description "who, in older societies was such a godsend, but who in the future, will be a public danger."

By the practice of this discipline our students may, we trust, like the great ones of the earth, act out their dreams instead of merely dream of their acts. But to do so they, and we, must believe quite as much in longings as in facts.

Recruiting Teachers

If teaching is presented in its true light, as a challenging profession which requires people of moral, physical, and intellectual stamina, if we take teaching out of the spoon-feeding, nurse-maiding, baby-sitting class of occupation, then I believe we shall have no trouble finding recruits.

— Una Wilson Napier

Why Johnny Can't Become a Scientist

A Criticism of Our Elementary Science Program

● *Edward J. Uber*

These views and findings on the problem of articulating elementary and high school science may seem, at the very least, provocative. But the thesis of this article is advanced with malice toward none. It is, indeed, controversial, but not just for the sake of controversy. It seeks, through the sharing of ideas, criticisms, and comparisons, to better the science program of our schools, and I hope it will not alienate or antagonize anyone since it is not intended to be critical of any particular person or group.

The Need for Scientists Is Not Being Met

Almost daily nowadays some part of our national press reports that our school science program is at least partially failing to meet the needs of our young people and the defense and industrial needs of our country. Our school program is not stimulating sufficient student interest in science to direct the abilities of American youth into challenging science careers.

Many engineering schools accept only those students who have completed four years of high school science. But how many high school graduates can meet — or want to meet — this requirement, even with the millions of dollars spent by the federal government and by industry for science scholarships and fellowships and for propaganda glamorizing the personal rewards accruing to the young scientist?

That all of this financial help and the propaganda have not been very fruitful becomes apparent when we consider such astounding facts as the following:

> American colleges turned out 57% fewer scientists in 1954 than in 1950.
>
> In 1954, 4.3% of high school students enrolled in physics; in 1900, 19% enrolled in physics.
>
> Since 1900, the percentage of students studying chemistry has dropped from 27% to 11%.

An indictment of the science program in the elementary schools of our nation makes up the main part of this article. Dr. Uber, an attorney-at-law, as well as chairman of the science department at Von Steuben High School, also indicates a possible solution of our science problem. This report, presented here in a somewhat condensed version, was originally delivered before a meeting in District One.

The October, 1956, issue of *The American Teacher* contained this statement:

> In June, 1956, there were graduated only 228 teachers in the whole of the United States who were qualified to teach high school physics. 47% of the high schools did not offer a course in physics last year, 23% offered neither physics nor chemistry . . . . When we realize there are 27,000 high schools in the United States, we begin to comprehend the enormity of our educational depletion. [Page 4]

Do the Causes Lie in the Schools?

Why do relatively fewer high school students nowadays enroll in courses in the physical sciences, despite the many inducements to do so? Why do such a surprisingly large number of high schools fail even to offer such courses? Why do our schools of education fail to produce enough teachers of physics and chemistry to meet our needs? Perhaps a look at the science program of our Chicago Public Schools can suggest answers to these questions. If conditions in our schools are in any way representative, the suggested answers may have national rather than purely local implications.

At Von Steuben High School, where most of the students are above average in abilities, where almost all students who enter graduate, and where approximately 90% of the graduates enter college, an investigation produces some startling statistics regarding science study. Although the entire freshman class is required to take general science, and 93% of the sophomores *choose* to take biology, only 35% of the juniors elect physics, and a slightly greater percentage, about 40%, of the seniors choose chemistry. At present there are eighteen sections of general science and thirteen of biology, but only four of physics, and six of chemistry.

Disturbed by this alarming picture of the status of science training nationally and the lack of student interest in the physical sciences at Von Steuben High School, I decided to attempt a search for the causes of these conditions. Since students frequently pursue in high school interests which they have begun to develop in earlier years, it appeared that I might find some information by examining the science course of study of the elementary schools. Accordingly, I consulted the Chicago Public Schools Science Teaching Guide which outlines the materials covered in science. What follows is a brief tabulation of the material taught in the elementary grades.

Science in the Elementary School

In the seventeen semesters from kindergarten through eighth grade, our boys and girls are conducted through seventy-three "units of learning" in science. A breakdown of these seventy-three units discloses information which I believe to be significant.

Of the seventy-three units, thirty-three seem, according to their descriptive titles, to deal with biology. The thirty-three are spread through the curriculum in this way. Three units dealing with biology are presented in kindergarten; four in first grade; six in second grade; four each in third, fourth, and fifth grades; three in sixth grade; four in seventh grade; and one in eighth grade.

There are nine units in the science curriculum which deal with safety; at least some of them are probably rightly

From *Psychology and Teaching* by Morse and Wingo: Copyright 1955 by Scott, Foresman and Company

Are we developing interest in the physical sciences early enough?

included in the limited science time of a school day. Here are the units, listed by grade level.

Kindergarten—Safety Rules
1A—Forming simple safety habits
2A—Developing good safety habits
3B—Acquiring safety experiences
4A—Playing and working safely
5A—Following habitual safety precautions
6A—Practicing safety rules
7B—Acquiring proper safety habits
8A—Being alert to safety hazards

Five of the seventy-three units might best be classified as units in "science appreciation." Some of these units could justly be charged to another department's time on the daily schedule.

5B—Enjoying contributions of aviation
6A—Encouraging the enjoyment of worthwhile hobbies
7A—Knowing local scientific centers
8B—Exploring scientific hobbies and careers
8A—Appreciating natural scientific wonders

Biology, safety, and "science appreciation" are the subjects of forty-seven of the seventy-three units, 64.4% of the total.

Five units dealing with meteorology, four in geology, and four in astronomy are distributed through the grades. Totalled with those listed above, these equal sixty units of learning.

Of the thirteen units that remain, four deal somewhat with chemistry—about 5% of elementary science time is given to this important field. Unit titles and their grade placement follow:

3B—Utilizing water in many forms
3B—Gaining knowledge about the air we breathe
7B—Becoming acquainted with nature of atmosphere
8B—Observing and understanding simple chemical changes

The remaining nine units of learning in elementary school science may be classified as preparation for high school physics:

Kindergarten—Discovering new things about our world
3B—Knowing our simple machines
4A—Experimenting with magnets
6A—Employing energy to serve and benefit mankind
7B—Knowing basic nature and application of simple machines
7A—Appreciating the importance of sound energy in modern living

Then, designed to foster an interest in physics, but more likely to destroy such interest, three admittedly difficult units in physics are crammed into the 8A semester:

Studying heat energy and its application
Understanding basic electricity
Adjusting light energy to vision

Physics and Chemistry Not Required of Teachers

In checking the curriculum of the Chicago Teachers College, I noted that, although our future teachers are required to enroll in laboratory courses in the biological sciences, they are graduated without being required to earn laboratory credits in physics and chemistry. This ignoring of physical science is most regrettable, especially when we realize that the program at the Chicago Teachers College meets state requirements, which permit the certification of Illinois elementary school teachers who have had no college courses in laboratory physics and chemistry.

Furthermore, Chicago schools, along with some other schools of the nation, apparently take a dim view of the necessity for science even for the principalship, as evidenced by the subjects in which candidates for the principalship are examined. All principals of the Chicago schools have successfully passed one of the most difficult and exhaustive comprehensive examinations in the nation. The two-day ordeal by writing includes tests in administration and supervision of the elementary school and in the content and method of teaching English, mathematics, history, and science. Candidates have no choice as to whether they wish to be tested in a particular phase of English; the questions on mathematics cover the entire field; history, to the Board of Examiners, means world and United States history as well as geography and civics. It seems then incongruous, and indeed unrealistic, in our scientific age, that our principals need to qualify in only one branch of science — for, as a matter of fact, they are examined in their choice of the biological or physical sciences.

Does Lack of Training Lead to Lack of Interest?

All these facts — the seeming unbalance of the elementary school science curriculum, the lack of training in physics and chemistry for elementary teachers, and the fact that even principals are not required to be trained in these fields — seemed to indicate that high school students may choose not to elect physics and chemistry courses because their potential interests in these fields have not been earlier developed. To test this hypothesis it seemed wise to examine the attitudes of high school students.

With the cooperation of the principal, the science teachers, and the students, I was able to make an

informal survey of attitudes at Von Steuben High School. Five hundred boys and five hundred girls, of whom about six hundred were enrolled in general science and four hundred in biological science, answered a questionnaire. A number of the questions asked are listed below along with an informal summary of answers received. Many of these answers have rather definite implications for those interested in elementary school science instruction.

Student Attitudes Toward Elementary School Science

What did you like about the elementary school science program?

The students listed study of astronomy, plants, animals, physiology, electricity, weather, geology; also charts, discussions, oral reports, experiments, and trips. Some were without an opinion because of little or no elementary science experience.

What did you dislike about the elementary school science program?

The most common complaints were too few experiments; too little discussion; too much written work; too little science; too many reports; too much reference and library work; not enough text books; long outlines for outside reading; same thing each year; too many collections; too little class time for science; too little explanation; too few demonstrations; too repetitious. Complaints seem to emphasize poor presentation and insufficient time allocated to science, but almost no one disliked science *per se*.

What would you like to see added to the elementary school science program?

Students wanted more of the following: visual aids, experiments, demonstrations, trips, movies, specimens, chemistry, and science daily instead of once or twice a week.

What would you like to see eliminated from the elementary school science program?

The students generally disliked much of the written work and straight book work; much of the reference work and the paper work; a long drawn-out semester on one topic, such as a whole semester on trees; assignment of a science subject to be studied at the library with reports to be handed in, after which no further comment was made on science for the rest of the semester. Apparently children do not want simply to read and write about science.

What did you learn in elementary school science that helped you the most in general science in high school?

The answers include plant and animal life; physiology; geology; meteorology; astronomy. It is significant that very few mentioned physics or chemistry units.

Would it be advisable to add more beginning physics and chemistry to elementary school science?

More than one-half of the girls and three-fourths of the boys want more physics and chemistry in the elementary grades.

Student Reaction to High School Science

Is there too much repetition of elementary school biology in high school general science?

Three to one or perhaps four to one answered in the negative. It appears the elementary science program has whetted the students' appetite for more biology.

Is there too much repetition of elementary school science and high school general science in biology?

The students overwhelmingly answered no. This is significant in that the greater part of science in the elementary school is biology and one-half of high school general science is biology; and yet the students want more biology.

Inasmuch as only general science is required for graduation from high school, why did you choose to take biology?

The answers were interesting; sequence; career; didn't need mathematics for biology; professional preparation; useful; college entrance requirement.

Do you plan to enroll in high school physics?

Most girls answered no; about one-third of the boys answered yes.

Why are you going to enroll in high school physics? (or why not?)

The reasons for enrolling in physics were career, interest, sequence, college entrance requirement, parents' advice.

The reasons for not enrolling in physics were fellow students say physics is hard; too much mathematics; don't like physics; not interested; cannot schedule it in my four-year high school program.

Do you plan to enroll in high school chemistry?

More interest was shown in chemistry than in physics. One-third of the girls and three-fourths of the boys answered yes.

Why are you going to enroll in high school chemistry? (or why not?)

The reasons for taking chemistry were not as hard as physics; sequence; interest; career; vocational preparation; college entrance requirement.

The reasons for not taking chemistry were: not interested; do not like chemistry.

Why did you not enroll in high school physics or chemistry instead of biology, if you are going to enroll in only one laboratory science in high school?

The answers included the following: easier because I know more about biology; more interested in biology; like biology.

The Student And Mathematics

Are you enrolled in geometry or do you plan to enroll in Geometry 1 and 2, Algebra 3, Geometry 3, Trigonometry, College Algebra?

Most students take Geometry 1 and 2 for the two-year mathematics sequence and, with the exception of those going on with science, drop mathematics. Few girls choose the third and fourth year mathematics courses. Probably one boy in three takes advanced mathematics.

Is poor background or dislike of mathematics a factor in not going on with science beyond a course in biology?

Answered in the affirmative by fewer than one-half. This could very well be answered differently at other high schools.

Student Interest In Science Careers

Are you now planning to pursue a science, a science teaching, or an engineering career?

> Comparatively few — maybe one of nine or ten — answered in the affirmative. This lack of interest is disturbing because the students' answers to the previous questions and their general academic records indicate more of the boys and girls at Von Steuben could profitably enter the science field.

Did you ever plan or consider making a career of science or engineering?

> Only a few other than those currently interested in a science career ever considered science as a life work.

If you are no longer interested in a science or an engineering career, what changed your mind?

> The answers were not capable; too hard; preparatory period is too long.

Are you aware of the great personal opportunities that exist in the science field, as well as the contribution you can make to your country by continuing your science study?

> Most of the students answered yes.

Do you realize that the entrance requirements of many engineering colleges now include four years of high school science and four years of high school mathematics?

> Nearly all of the boys and girls answered in the affirmative.

More Physical Science For Teachers and Students

The answers to this questionnaire seem to indicate that our elementary schools are interesting many students in the biological sciences by giving a thorough foundation in the living sciences. But does it not seem possible that the lack of interest in physics and chemistry in our high schools is caused by the limited experience the pupil receives in these branches of the physical sciences in elementary school? W. C. Croxton, in *Science in the Elementary School,* advances this idea succinctly:

> The first years of the child's life are the most important formative period and are likewise most important in establishing scientific attitudes. [Page 49].

If this study indicates any possible solution to the national problem of producing scientists, it is (1) that we should complement the wonderful elementary school biological science program with an equally inclusive and effective physics and chemistry program in the primary, middle, and upper grades and (2) that elementary school science teachers should be required to have laboratory experiences in college physics and chemistry — probably two of the most important and dynamic subjects of our atomic age. These steps would seem to promise to return far greater dividends than the huge sums of money being spent by American industry to develop scientists.

Washington and Chicago Cooperate in Research

Begin Study of Program For the Mentally Handicapped

● *Frances A. Mullen*

The U. S. Office of Education recently allocated almost $600,000 for research on the education of the mentally handicapped to be carried on in the Chicago Public Schools. On March 18, 1957, seven teachers and psychologists and two clerks — a staff which will be expanded as the project moves into full operation — went to work on this three and one-half year task.

After months of planning and negotiation, R. Sargent Shriver, President of the Chicago Board of Education; Vernon Nickell, Illinois Superintendent of Public Instruction; and Lawrence G. Derthick, U. S. Commissioner of Education, signed a contract which is deeply significant in the history of American education. The signing of the contract has significance for the U. S. Office of Education, for the direction of work with mentally handicapped children in the years ahead, and for the Chicago Public Schools.

That the Chicago Public Schools have become centers of experimentation and research becomes more and more apparent as one considers the teaching-by-television experiments and the more recent cooperative research project in special education. Discussing the latter topic, Dr. Mullen, Assistant Superintendent of Schools in charge of Special Education, reveals how this project in the education of the mentally handicapped is a pioneer effort which, like all pioneer efforts, is not without difficulties.

Significance for the U. S. Office of Education

The event was significant for the U. S. Office of Education because it initiated an expansion of responsibility and opportunity for service on the part of that office. During the postwar years, while many agencies within the Department of Health, Education, and Welfare were expanding, while research funds for mental health, neurological diseases, blindness, vocational agriculture, and vocational rehabilitation were initiated or expanded, the U. S. Office of Education remained grossly understaffed and underfinanced, unable to provide the leadership in study of educational problems which is expected of the federal office. It did not have funds to keep up to date publication of its biennial series of statistical reports of American education. Commissioners of Education came

and went in rapid succession, frustrated by lack of facilities to accomplish the important functions of their office.

In 1954, the 83rd Congress took a significant step forward passing Public Law 531, which authorized the U. S. Office of Education to engage in cooperative educational research, with universities, colleges, and state education agencies. Since no funds were appropriated, this remained a somewhat empty authorization until 1956, when Congress made the first appropriation of $1,000,000 to implement Public Law 531 during the fiscal year beginning July 1, 1956, and earmarked $675,000 of that million for research on the teaching of the mentally handicapped.

Almost immediately, those in the Chicago Public Schools who have long felt the need for intensive research into the education of mentally handicappd children sought a grant for the purpose of studying the large program already in force in our schools. Since the law specifically authorized cooperative research only with universities, colleges, and state education agencies, funds could not be directly allocated to a public school system. Soon, however, with the cooperation of the Illinois Department of Public Instruction, a way was found to overcome this difficulty. The untangling of legal problems and the arranging of two-way channels for funds and for reports between Chicago, Springfield, and Washington has perhaps set a pattern that other school systems may follow.

The U. S. Office of Education has demonstrated its belief that research in and by a school system can be of as high a technical standard and just possibly more fruitful than research directed from a university.

Significance for the Mentally Handicapped

Mentally handicapped children comprise at least 2 per cent of the nation's school age population—at least 700,000 children. Of the 700,000, some 113,000 were in special classes in 1952-53. Such classes have existed in Chicago and elsewhere since the turn of the century.

Parent and public interest is encouraging the schools to increase services to the mentally handicapped in the years immediately ahead. Yet, we still do not have scientifically valid evidence of the value of existing special programs; we do not have answers substantiated by experimental research to the most fundamental questions in the education of these children. It is to find, if possible, answers to these questions that we have embarked upon this research project.

Significance for the Chicago Public Schools

The project is truly a Chicago project. The proposal was drawn up by a Chicago committee: the Assistant Superintendent in charge of Special Education; the directors of the Bureau of Mentally Handicapped, the Bureau of Child Study, and the Division of Student Examinations; the director of the Graduate School and the heads of the departments of education and psychology at Chicago Teachers College.

Advice was sought from many others in and out of the school system, and plans were revised on suggestions from the U. S. Office of Education,

but the project remains a Chicago Public School project designed to test hypotheses upon which many aspects of our work are currently based. The work will be carried on by a staff selected from people experienced in the Chicago Schools, though outside consultation will certainly be sought, and some outsiders may be recruited if that seems desirable.

For the Chicago schools, the research project should be a most healthful experience. Those of us who work in the schools all try to evaluate our work, to test our hypotheses, to review our procedures. But after a grueling day in the classroom or on the administrative or supervisory grind, there is left little time and energy for the careful compilation of large masses of data. We have little opportunity to collect or analyze large scale or long term samples of pupil behavior; there is available little help in applying refined statistical techniques to check the significance of our findings. The teacher or administrator doing research for his graduate degree uses the pupils or classes available to him, with almost no possibility of adequate control of all relevant factors and no provision for city-wide perspective.

In the new project, we have funds for IBM service to handle data, and funds for consultation, which will be used more for bringing the insight of our own teachers and staff members to bear on the problem, than for bringing us "big names" from outside the system. We will have, in short, both the time and the money necessary for effectively carrying out research in this important field.

Can Public Schools Do Effective Research?

All the other grants by the U. S. Office of Education have been made to university groups to be administered by people whose major professional interest has been in research in its most sophisticated aspects. Will this project lack something because it is a public school project? We do not think so. Not only the persons already appointed to the project, but many of those who made application and could not be used at this time, have backgrounds of academic training and experience and have demonstrated a creative ingenuity and freshness in approach to school problems which can be compared with pride with the qualifications of any research team any university is likely to assemble.

And we have the advantage that no university, no matter how good its relations with its neighboring public schools may be, can quite match. Our project is firmly imbedded in the needs of the school system; it is operated by people who know operation of the schools from the inside; it is so designed as to bring many people who are actively working with the handicapped into close partnership with the research team. We have, therefore, an opportunity to do an insightful and practical job, to tackle problems meaningful to our own teachers, and to secure results directly applicable to the solution of everyday problems.

The Design and Purpose Of the Project

The design of the project envisages no artificially created classes. Research will be done in the ungraded classes as they now exist; it will follow men-

tally handicapped pupils (carefully matched with those in the special classes) who remain in the regular grades. When different methods of instruction are compared, both will be within the framework of our usual procedures. There will be no special dispensations as to class size, no rigid controls which would bring together a more homogeneous group than we are likely to find in the present program. What we find will be applicable in the conditions under which we work today.

Within this design, the project will attempt to test three hypotheses upon which much of our program for the mentally handicapped is based. The first of these hypotheses is that a comprehensive program for the development and improvement of reading skills of mentally handicapped pupils — a program including wide use of free reading along the lines of pupil interest — is both feasible and advantageous. The second is that a strong emphasis on phonics accelerates the learning of reading by mentally handicapped pupils. The third hypothesis is that the unit method, cutting across subject matter lines and centering on topics of pupil interest, is more effective than a method which compartmentalizes the classroom program into specific and relatively regular periods dealing with separate school subjects.

The staff appointed to date include: Dr. William B. Itkin, formerly with the Bureau of Child Study, as director; Miss Mary Cummings, former teacher of the educable mentally handicapped at Crane High School; Mrs. Lucille Barry, former adjustment teacher of the EMH groups at the Franklin School; Mrs. Willie Scarborough, former teacher of the trainable mentally handicapped at Spalding; Dr. Eugene Richards, formerly with the Bureau of Child Study; and Dr. Berthold Demsch, former teacher at Brentano School.

Offices for the project are located at the Chopin School, 2450 Rice Street, with telephone service at Albany 2-0130.

The writer of this article continues as an ex-officio supervisor of the project, and official consultants include: Dr. John M. Beck, chairman, department of education, Chicago Teachers College; Dr. William Canning, director, Bureau of Child Study; Dr. Carl A. Clark, chairman, department of psychology, Chicago Teachers College; Dr. Max Engelhart, director, Division of Student Examinations; Miss Bernice M. Grannon, director, Bureau of Mentally Handicapped; and Dr. David Kopel, director, Graduate School, Chicago Teachers College.

Project Depends upon The Classroom Teacher

This project pins its faith on the classroom teacher; from him it expects to get the basic material that will enable it to measure the less tangible outcomes of teaching; from him it expects to get the frank advice that will keep the project on an even keel, point out fallacies, predict pitfalls.

In order that teachers may aid the project in this way, substitutes will be employed to teach classes for a day or two at a time while small committees of experienced teachers are brought in to thrash through each specific project, each specific measuring device, each detail of procedure. Ample funds for this purpose have been provided. This

form of consultation will be a major strength in the project. No device will be used without securing the critical appraisal of the people closest to the problems — the teachers.

Numerous Difficulties To Be Overcome

The project has many hurdles ahead. Writing practically on the opening day of the project, no one can be rash enough to say how well we will succeed. Can we get the cooperation that will be needed? Can we develop methods of work which will get the necessary data without disrupting classroom procedures, without adding to the burdens of teachers? Can we bring out the know-how, the insight, the creative ingenuity of our classroom teachers? Will we be able to find really valid measures of the important aspects of child growth we want to assess? Will we be able to eliminate all extraneous factors — to get answers definite enough to be useful, broad enough to be applicable in many situations? We certainly hope to be able to do so, but we know we have undertaken a difficult assignment.

But let us assume that the project is successful — that some new insights do emerge, that three years from now we can say more positively than any one can today that this procedure is good under such and such circumstances; that technique has little value with this group; another principle has been established. What then? The hypotheses we set up today touch only a small segment of the problems of teaching the mentally handicapped — a much smaller segment of the problems facing the schools of America.

Results May Affect General Teaching Techniques

One possible result of the study is that a picture of the way mentally handicapped children learn may give us a slow motion picture of the learning of average and bright children. Research on the mentally handicapped may well lead to greater insight into the learning processes of all children.

If the project establishes a technique of working within a school system; if it finds ways to evaluate procedures without disrupting classrooms or adding to the grey hairs of overburdened teachers; if it increases the tendency of all school people to ask "How do you know?" when procedures are recommended; then there should be further similar projects in many areas.

As an immediate outgrowth of this study, there should be a continued follow-up of the youngsters about whom we will already know so much. The whole process of transition from school to work and to community living should be investigated and the responsibility of the school for the older group clarified. We should extend our study to younger children, to find out whether, even with the mentally handicapped, an early start might lessen later problems.

Three U. S. Office of Education grants have already been assigned to studies on education of the gifted. This is an area in which Chicago can well use assistance in evaluating its own program. The number of school problems to be investigated is limitless.

Counseling and Guidance In the Classroom

Achieving Sound Personal Relations with Students

● *Emma Fleer Muller, Marie Tierney, Oscar Walchirk, and William Watson*

Occasionally, one hears the statement that there is no time for counseling in the classroom. As a matter of fact, the teacher is constantly engaged in guiding, either consciously or unconsciously, the entire class before him. At times, the teacher enters either formally or informally into a counselor-counselee relationship with one of his students. In the broad sense in which this article uses the terms the teacher is frequently, almost constantly engaged in either individual or group guidance.

No teacher can fail to notice that individual students occasionally assume the role of leader toward other students or groups of students. This leadership, as we well know, may lead to either good or bad ends. Every teacher needs to know how to recognize and how to cope effectively with this tendency.

If he is to do so, the teacher needs to understand his students as individuals, as members of smaller groups within the class, and as parts of the class as a whole. He needs to recognize what is normal behavior for a given age group, a part of growing up, and what is not. He needs to be able to decide what kinds of behavior he can guide effectively and what kinds demand that he seek professional help outside the classroom, needs to be aware of the fact that the frequency with which certain problems appear in his class may differ from the frequency with which these same problems occur in another class in the same school or in a similar class in a different community. He needs, in short, to have the sensitivity and the orientation of the counselor.

We know that it is important to

The classroom teacher can put to good use the knowledge of human relations accrued in recent years in the field of counseling and guidance. The authors, members of the faculty at Chicago Teachers College, have had wide experience in individual counseling. This adaptation of a panel discussion in which they participated offers the person who is primarily a teacher some applications of what they have learned.

establish in a classroom a climate that is conducive to learning — one that minimizes tension, recognizes negative feelings and hostility, and alleviates emotional conflict. It is at least partly through the use of counseling and guidance techniques that the teacher establishes such a climate.

The Scope of The Teacher's Influence

The influence of the teacher as a counselor and guide extends beyond his classroom into the home. This is particularly noticeable among young children. Their minds are occupied with school not only during the hours of their physical presence at school but also during much of the remainder of their days. The climate of the classroom is frequently reflected in their behavior at home. The wise teacher realizes that his personal relations with his students can, and frequently do influence the attitudes and behavior of his students far beyond the classroom.

If the teacher recognizes that his sphere of influence is so vast, and that he *does*, whether or not he likes it, function as counselor to his students, he does well to be consciously aware of the theory and practice of counseling.

Counseling — A Human Relationship

Modern theory in counseling emphasizes the importance of a particular kind of relationship between two people. It is the responsibility of the counselor to establish this relationship and maintain it. In essence, it amounts to little more than a relationship in which good communication can exist, a kind of communication that is frequently impossible in our ordinary human relations.

One of the things we have learned about counseling, and about the kind of communication it involves, is that there must be a relationship of mutual respect, as Piaget calls it. Too often, an attempt at counseling fails through the counselor's knowingly or unknowingly maintaining a role of superiority.

It is always difficult for a parent, or a doctor, or a teacher, fully to respect a young person as an equal person (which is just what mutual respect means.) Our habitual way of addressing young people, whether they are our children, our patients, or our pupils, seems to stand in our way. We feel constrained to stand on formalities or to employ a special tone of voice or manner of speaking designed especially for use with children. This, to the youngster, merely emphasizes the gulf between us. True communication cannot begin until somehow that gulf is bridged.

The Need To Be Safe from Ridicule

Another thing we have learned is that no child — or grownup for that matter — can let himself expose his real thoughts and feelings until he knows he is safe from ridicule or rejection. He must know he can trust the counselor to respect his revelations and his confidences. If communication is to succeed, both parties to it must be participants. Unless the relationship is secure in this sense, no real communication betwen them can take place and the real problems, the real sources of the difficulty will remain hidden. Only when the child is certain that he is fully respected and safe from ridicule can he take the first step across the gulf that separates him from the

The Counselor Influence May Be Great or Small.

counselor. The counselor needs to show that he respects the child as a person. Then the child can take that first step, and the counselor can go to meet him half way.

For all of the psychological research that has been done, there seems to be little evidence to support the notion that bad children are in any way different from good children, other than that their needs are more pressing. Perhaps we can help reduce the pressure of those needs and help the child discover an answer to them. Perhaps if we can but provide him with the opportunity for such a human relationship he will seize it.

That a classroom teacher is also a counselor of students seems obvious from what has gone before. If we think of counseling as a procedure whereby Johnny's attitudes are shaped or changed to help him develop new insights or attitudes, to gain new concepts and achieve greater understandings, we cannot help but realize that truly the counselor and teacher do have similar objectives.

What Counseling Is Not

It is as important to know what counseling is not as to know what it is. Since there is such a close relationship between counseling and teaching, it is safe to say that poor counseling techniques are also poor teaching techniques.

One method once used in counseling is that of forbidding an individual to proceed along a particular path he has selected or to follow a pattern of behav-

ior he has adopted for himself. This method of counseling has fallen into disuse because it actually proved ineffective. If teachers and counselors are really interested in changing human behavior, the technique of ordering, remanding, threatening, or forbidding seems not to achieve this aim. It simply does not have a lasting effect on human behavior.

Another counseling procedure used in the past with little success is that of asking a student to promise or pledge himself to do better in the future. This, too, has little lasting effect. We have all seen students so promise and then relapse into their previous behavior patterns.

A third counseling technique which has severe limitations involves advising or persuading the student to move in a particular direction. An obvious weakness in this approach is the well validated fact that students with worthwhile habits of independent action may very well reject advice or suggestions of well-meaning persons in order to maintain their integrity as individuals. On the other hand, as has been pointed out by Rogers, students who are already deeply dependent upon others can be driven deeper into dependency through the use of this method. Advice, suggestion, or recommendation may assist a youngster in solving his immediate problem, but it does not necessarily make for the individual growth and health which the student could achieve through independent action.

The Teacher As Counselor

If the teacher is not to order or forbid, not to guide behavior by eliciting promises, not to advise or persuade the students to a particular course of action, how is he to teach — how to counsel? What must he do or be in order to make sure he does not neglect this most important aspect of his work?

There are four ways in which the the teacher can guarantee that he fulfills his function: he can see to it that his preparation for teaching is such that his teaching is reasoned and effective; he can establish a classroom climate which will provide security; he can demonstrate confidence in his students; and, finally, he can broaden his relationship with students through parent cooperation.

The Teacher As a Person

The teacher must be a secure person himself if he is to guide students effectively. He must understand children, how they learn; he must have a thorough knowledge of subject matter, together with skill in effective methods of teaching. It is upon this firm base that he can build attitudes of confidence in his students.

The teacher has the role of leader in the classroom. Students expect him to fulfill that role. If he fails as leader, his place will be filled by one or more than one student, causing the varieties of frustrations which many-leader situations bring about. Warm, friendly, confident leadership by the teacher fosters security in pupils.

The Teacher Creates The Atmosphere

The classroom must radiate the type of climate in which children will grow. It must be cooperatively organized by both students and teacher to express the creativity of both. It must be a *secure* place to which they come each

day. In classroom organization, routines play an important part in establishing confidence in the students. They are unafraid when they know what to expect.

To help students to grow in flexibility of response, the challenge of new situations should be present as well. Opportunities for inventiveness, for self-expression, and for independent action should be provided. The awareness of the student to the need for exercising his own judgment helps him to welcome rather than to fear the novel in the day's activities.

The Teacher's Attitude Toward the Student

Just as important as the need for the teacher to establish the student's confidence in him as a teacher is the need for the teacher to express confidence in the student's ability to exercise judgment, and in his desire to act as a good citizen.

But the student needs more than the teacher's approval of him as an individual. He needs also to feel the strength of group support, to have the assurance of acceptance by the other members of his class. The teacher can do much to establish the classroom climate wherein each individual is accepted by the group on his own merits. Good group morale provides strength for each individual.

The wise teacher provides for the stresses which come to each student, helps the student to meet failure as well as success effectively, helps him to adjust to the realities of living.

The teacher helps the student to know his strength and to understand what he can do to overcome his weaknesses. He provides sources of help so that the student can use them independently. The teacher tries to direct the student's learning on a comfortable plane, with the striving pointed toward attainable goals. Finally the teacher can broaden the field of mutual confidence — his own and the student's — through joint interviews with children and parents.

Teacher-Parent Interviews Desirable

Interviews with parents help to build security for all concerned. The teacher, parent, and child, working toward common purposes can achieve a sense of direction which fosters in all of them the kind of confidence which springs from mutual purpose and understanding.

Personal relations between teacher and student are quite like the relations the counselor tries to establish with the student whom he counsels. The teacher should apply the knowledge and techniques of counseling to establish in the classroom the kind of climate in which both teacher and students feel secure. Thus only can he effectively communicate with his students and successfully stimulate growth.

Tips for Teachers

• Practice in Democracy
• Boredom Overcome

Using Student's Interests To Promote Learning

Teachers are well aware when planning activities or lessons that pupil interest is a major concern. With this in mind, our plans are usually centered around interests common to the age group with which we will work. As often as not, our planning is rewarded to the extent that we do succeed with the majority of the class.

Many times, however, one individual student (sometimes more) refuses to become interested in class activities and advertises this fact both to the class and the teacher. When this happens, the teacher faces a critical problem.

Recently, one such student was a member of my Biology I class at Harrison Technical High School. Richard was just plain "bored" with every activity, no matter how well planned. In fact he was rapidly degenerating into a class nuisance. Searching for the reason behind this behavior, I decided to interview Richard for some possible clue. During these interviews, I discovered that Richard's main interest was woodworking. At the time, fortunately, the class was working on a unit about insects. I asked Richard if he would construct an ant nest for the class. He readily agreed. During the following week, he constructed a beautiful ant house for the class. After its construction, he brought in ants, stocked the nest, and made observations which he reported to the class.

It would be pleasant to report that Richard became a model student. Not so! However, he did succeed in his class work and showed much more willingness to cooperate.

By relating his class work with an already existing interest, Richard was able to succeed when it seemed that failure was almost certain. Incidentally, one year later, Richard's brother marched into class and proudly announced that he was a member on his brother's recommendation.

— William O. Tuominen

Student Council Elections Provide Practice in Democracy

The attitudes of the voters of the future may well be determined by the experiences they have in student government. Since it fell to my lot as the social studies teacher in the upper-grade departmental organization at the Bright School to be sponsor of the student council, I determined to do all in my power to make student council elections as meaningful and reasoned a procedure as possible for all students involved.

Before we began to discuss any

This is another in a series of practical teaching tips for teachers at various grade levels. They have been provided by classroom teachers who jot down and send us ideas, techniques, and procedures which they have found useful and are willing to pass on as tips worth trying or adapting to other classrooms.

This department welcomes contributions from other teachers; in fact it depends upon them. Merely jot down your teaching tip informally and briefly, and send it to the *Chicago Schools Journal*, 6800 Stewart Avenue, Chicago 21.

specific students as candidates for student council, each of the social studies classes compiled a list of desirable traits for candidates. With this list as a beginning, we established a corridor bulletin board. We posted the list so that all upper grade students could study it before nomination day.

Upper grade home room teachers conducted nominations in their classes and sent the results to me. After a faculty committee had screened and approved nominees, a student committee took charge of preparing the official ballots.

The committee prepared a spirit duplicator master and duplicated a supply of ballots. While the ballot committee was at work, the campaign committee swung into action.

On the bulletin board they posted a sample ballot, pictures of all candidates, and a composition by each candidate outlining his qualifications for office. The campaign committee also collected, approved, and posted in the halls campaign posters for each candidate. During the campaign period, social studies classes studied the Australian ballot system.

On election day, candidates made a tour of the classrooms; they were introduced and spoke briefly to each class. At the conclusion of the speeches, each student marked his ballot and placed it in the room ballot box.

The ballots were collected and tabulated by an election committee. The committee announced results to each class and posted the results on the bulletin board.

Prior to the first meeting of the student council I gave the newly elected officers special training in conducting meetings, so that by the time they took office they were well-prepared for their responsibilities.

I am sure that all the students learned much from this election experience. Not the least of what they learned, I hope, is that selecting leaders in a democracy should be a reasonable, orderly process.

— Lorraine La Vigne

Ancient Complaint

We learn our lessons not for life but for school.

— Seneca

News in Education

● *Edited by George J. Steiner*
Chicago Teachers College

X-Ray Requirement For School Employees

The pre-addressed chest x-ray survey report cards supplied by the Chicago Municipal Tuberculosis Sanitarium were distributed to employees of the Chicago Board of Education during the first week of April. Employees are requested to use these cards when taking their examination.

In event that the pre-addressed card which was issued has been lost or mislaid and it becomes necessary to use a blank card furnished by a mobile unit, blank cards are to be addressed as follows:

Top line: Name Title School
Second line: 228 North LaSalle Street, Room 746
Third line: Chicago 1, Illinois

Last year more than one hundred employees lost their cards and used blank cards at the time of examination but failed to put their names on the cards. This caused considerable confusion since there is no way of identifying such employees.

Suburban mobile units operate in Cook County outside of Chicago. These mobile units cannot accept pre-addressed cards. Employees taking their examination in suburban areas should copy the data from their pre-addressed card onto the blank card given by the county unit so that in this instance also the report will reach the proper authority.

Unit locations and hours of operation for mobile units are posted on the bulletin board of each school.

Jobs Not the Answer For Troublesome Students

Students who are troublemakers in school don't change and become good citizens when permitted to leave school and go to work. A recent study made by the New York Board of Education's Bureau of Child Study indicates that the difficult students may get into worse trouble if left to their own devices.

A follow-up study reveals that pupils given permission to qualify for special work certificates at the age of fifteen, fewer than ten per cent actually went to work. Sixty per cent of the group remained unemployed when they reached the age of sixteen, the normal school-leaving time. More than half of the group got into trouble with the police for car stealing, assault, robbery, and other offenses.

Although the number of pupils involved was limited, the study indicates

a need for other approaches to the slow or problem child. One suggestion is that schools must increase their facilities for earlier recognition of potential troublemakers, and must provide special guidance for them when identified. The study also suggests special curriculum planning and more remedial teachers as means of dealing with truant and disruptive high school students rather than throwing them in the lap of the community where they do little more than roam the streets and create disturbances.

New School Plan In St. Louis

The division of high school students into groups of study at three levels of ability was approved by the St. Louis Board of Education during April.

The program will start next February when incoming ninth-grade pupils will be screened to fit them into the most desirable study patterns. This placement will be determined by intelligence and achievement tests, as well as such factors as attitude and interests. The aim of this new plan is to enable a student to utilize his learning ability to the fullest extent by putting him in classes with others of similar ability and designing courses to fit that ability.

Administrators believe students in all three levels will receive a better education than at present because class progress will not be affected by the problems resulting from a mixture of achievement abilities.

Upon entering high school, students will be placed in some subjects according to their achievement in elementary school. If their knowledge of English is at a tenth-grade level, they will start high school English at that level. Nevertheless they will get a full four-year English program finishing in the twelfth grade with college-level English. If their reading level is at the fifth-grade level, their literature classes will present them with material to fit their age, but written for the fifth-grade reading level.

The plan is an outgrowth of four years of study and experiment in the St. Louis school system. The study has resulted in the establishment of two special programs designed to improve the education of highly intelligent pupils. A "major learning program" was started in high schools in January, 1955, and was followed in September with the establishment of special classes for gifted pupils at the sixth-grade level.

Under these programs bright students have received enriched instruction and have been encouraged to participate in extra-curricular activities. The "major learning program" provides extra units of English, social studies, mathematics, science, foreign languages, and two additional units of electives.

The effectiveness of this enrichment effort was reflected in a Board of Education report of January 21, 1957. It showed that 38.6 per cent of students enrolled in high school were taking either algebra, geometry or trigonometry, and 33 per cent were studying the laboratory sciences of biology, physics, chemistry, and physiography. Officials claim that this was considerably higher than the average for the country.

The prod that resulted in the overhauling of the high school program was the problem of counseling. This problem involved the directing of students on course patterns by which they could profit most. In many instances students of low-achieving ability had chosen classes in which they could not effectively do the standard of work required, while superior students had selected courses that were not chal-

lenging them. Although many details have not yet been worked out, the public school administrators of St. Louis are attempting to meet and solve one of the major current educational problems "head on" — a circumstance for which their constituents should be grateful and proud.

Local Schools And Merit Scholarships

The names of the 830 winners in a country-wide competition for college scholarships were announced recently by the National Merit Scholarship Corporation, Evanston, Illinois.

There were nine winners from Chicago and twenty-six from the suburbs. Three Chicago winners were from Hyde Park, Morgan Park, and Senn High Schools; six were from parochial high schools.

The winners were selected from a field of 162,000 high school seniors. Each will receive from $100 to more than $2,000 per year for four years, depending on financial need. They may attend any accredited college and take any course they wish. With each scholarship goes a cost-of-education stipend to the college selected by the winner to make up the difference between tuition charged and the cost of educating the student. The minimum, scholarship, $100, is given to students who do not need financial assistance.

College Enrollments Continues to Increase

Total enrollment in 1,852 collegiate institutions this year is expected to reach 3,250,000, an all-time high, according to Lawrence G. Derthick, Commissioner of Education. Enrollment is 39.2 per cent higher than in 1951 and is 10 per cent higher than last year, the previous high. Teachers colleges gained 13.4 per cent over last year while junior college enrollment rose 12.7 per cent. Freshmen enrollments were up 53.2 per cent over 1951.

The ten institutions of higher learning reporting the largest enrollments this year are the following: University of California (all campuses) 36,303; New York University, 31,203; City College of New York, 28,178; State University of New York, all campuses but excluding agriculture and technical institutes, 27,566; Columbia University, 26,966; University of Illinois, 26,471; University of Michigan, 25,153; University of Wisconsin, all campuses, 24,442; and Ohio State University, 22,470.

Human Relations Workshop At Northwestern University

A three-weeks workshop on Human Relations Education will be held August 5-23 as part of the summer program of the School of Education, Northwestern University. It will be under the joint auspices of Northwestern University and the National Conference of Christians and Jews. The course is planned to provide orientation to human relations problems and intensive training in the planning of instructional programs for better human relations.

The class will meet in Wieboldt Hall (Chicago Avenue Campus) five days a week from 9 a. m. to 3 p. m. and will offer three semester hours of graduate credit. Teachers desiring to attend on a non-credit basis may so register.

Some scholarships are available. Application blanks for scholarships and for admission to the workshop may be obtained by writing to the National Conference of Christians and Jews, 203 North Wabash Avenue, Room 918.

Periodicals

● *Edited by John M. Beck*
Chicago Teachers College

"Public Schools and the Mentally Retarded." By David Wayne Smith. *The Elementary School Journal*, April, 1957.

The author questions the ability of public schools to assume full responsibility for the care, training, or education of the mentally retarded. A recommendation is made that public schools attempt to define the limits of their responsibility and undertake those tasks for which they are adequately prepared. The following provisions are suggested:

All children who are totally dependent (intelligence quotients of 0-24) should be in a residential school where they can be given the best possible custodial care. The cost should be borne jointly by the state and the county and, in some cases, the parents.

Children who are trainable but not educable (intelligence quotients of 25-49) should not be placed in public schools. The burden of teaching them would be too great for the regular classroom teacher. The child would gain little and the other children would lose much from the integration. Trainable children make better adjustments in the colony-type situation, in a good institution under close supervision.

The educable mentally retarded (intelligence quotients of 50-75) can be provided for in the public school. However, the best interests of these children in a large heterogeneous class can only be met by a program that provides for enrichment and acceleration on an individual basis.

"A New Deal for Teachers." By Sloan Wilson. *Parents' Magazine and Family Home Guide*, April, 1957.

Increasing teachers' salaries is not the magic formula to end the shortage of qualified teachers. Sloan Wilson maintains that teaching always will and should appeal to people who are not interested primarily in money. What interests people more than money is a way of life. More people would choose the profession if the teacher's life were a more pleasant one. "But the plain, blunt fact," according to Wilson, "is that the teacher's life is not a particularly pleasant one in most communities."

Both school administration and community are said to be at fault for the teacher shortage. First of all, a teacher has less leisure than most people. It is not unusual for a teacher to be forced to spend half her time at numerous boring chores unconnected with teaching.

Another thing teachers lack is independence. No one is more vulnerable to community pressures and gossip. In many places public school teachers can

be dismissed without real cause by the school board and the superintendent. This lack of independence is also evident in the classroom. Teachers are seldom consulted on policy decisions by school administrators and often find themselves with little more authority than privates in the army. Sloan Wilson concludes this indictment of school practices by stating that the school administrator"s lack of respect for teachers results in the loss of many fine teachers each year.

A ten-point plan for school conferences is suggested for initiating community action to obtain a new deal for teachers.

"Teacher Supply and Demand: A Turn for the Better?" By Roy C. Maul. *The American School Board Journal*, April, 1957.

The teacher supply-demand prospects are not encouraging for September, 1957. Maul's annual survey forecasts a continued, severe teacher shortage. At the elementary school level the shortage threatens to be more serious in 1957 than it was in 1956. The 4.9 per cent increase in the number of June graduates preparing to become elementary school teachers, even should all of them enter teaching, will fall short of the demand. A much larger supply is needed to serve the anticipated 800,000 additional pupils in the first six grades and to relieve the overcrowding of many classrooms.

The forthcoming supply of high school teachers is 13-9 per cent greater than a year ago, the total graduates probably equaling the number of new high school teachers who will be actually employed next September. However, a shortage is imminent due to two facts: (1) only about two-thirds of the 1957 class of some 65,000 can be expected to accept teaching positions, and (2) new graduates are not distributed according to needs in special fields. The new supply of science teachers has shrunk 45 per cent since 1950; only about 59 per cent of the new group will be attracted to the classroom. Mathematics faces a loss of one of each three newly qualified eligibles for teaching.

The teacher supply-demand problem confronts almost every school district. According to Maul, alleviating the current shortage of competent teachers requires a substantial increase in financial support of schools. In addition to providing more classrooms, steps must be taken to re-examine not only salary but work conditions of teachers.

"Breakdown in Teaching Requirements." By Sam P. Karr. *The American Teacher Magazine*, April, 1957.

Educational standards are being threatened by a widespread employment of unqualified teachers. A salary survey report by Mary Herrick, Chicago teacher and A. F. of T's. research director, indicated that school districts in at least 44 of the 48 states, due to teacher shortages and economy measures, are staffing classroom with non-degree teachers. In 29 of these states legislative approval has been given to employment of non-degree teachers by establishing minimum salaries. Among these states, the Idaho, Kentucky, Louisiana, and Tennessee laws provide for employment of teachers with less than one year of training.

Beginning salaries in most of the "non-degree-states" are less than $2,500 a year, requiring up to 20 years to reach low maximums. Salary increases noted in 970 schedules for degree teachers barely hold the line with rising cost of living.

The survey report, which covered 71 per cent of the country's school districts over 10,000 population, also presents schedules for selected cities.

"TV as College Teacher." By Charles E. Packard. *School and Society*, March 30, 1957.

"Why is TV more effective and how?" In answering this and other questions raised in the article, the writer takes issue with the published results of television teaching experiments. One serious criticism is directed at the experimental design which fails to account adequately for existing variables; consequently, the reported advantages of the TV medium are said to be greatly exaggerated. Another major weakness found in experimentation is basing the measurement of TV instruction solely upon the acquisition of factual knowledge, without judging the evidence of originality, reasoning quality, and aptitude in organization of the student.

It would appear that the TV fad has educational limitations which have not been thoroughly explored. Apparently the hidden resources of the human mind can be developed best by human interaction. In general, teachers accept TV as a supplementary educational device.

"Youth and Work." By Sol Markoff. *Children*, March-April, 1957.

The writer, executive secretary of the National Child Labor Committee, recommends the re-examination of child-labor laws for possible revisions which might better promote the welfare of youth by permitting more opportunities for worthwhile work experiences. He is supported by educators, psychologists, juvenile court judges, and other professional members who find many of the current child-labor laws too rigid and too restrictive.

It is not intended that the re-examination should merely reduce the restrictions of child-labor laws. A weakening in the legislation would lead to a complementary weakening of compulsory school attendance regulations since these measures reinforce each other. Basically, a periodic review of child-labor laws is suggested to insure the adequacy of work regulations in promoting the well-being of youth. Under proper conditions work experience can help the adolescent in the growing-up process of becoming weaned from parental protection and developing self-reliance. The experiences of finding and holding a job will give the youngster a realistic introduction to the many facets of employment, a major aspect of his life. Judicious laws will help to achieve desirable goals, but the writer concludes that the success of teen-age work depends on voluntary and cooperative interest and action by all community agencies involved in youth welfare.

"The Case for Abolishing Freshman Composition." By Arthur S. Trace, Jr. *The CEA Critic*, February, 1957.

An English professor questions the effectiveness of the traditional freshman composition course. It is his contention that an honest evaluation of student performance would reveal that about seventy per cent of the freshmen were writing no better at the end of the term than at the beginning. The reason advanced for poor writing in composition courses is attributed in part to two fallacious principles: (1) that students can learn to write merely by writing; (2) that if a student can conquer all errors in grammar, spelling, punctuation, and other mechanical aspects of composition, he will somehow be able to write competently.

A more effective freshman English program for the average and to a large degree even the below-average student is one that emphasizes a close relationship between reading and writing. The author's ideal program would be a two-year course in literature with readings

carefully grouped and graded in degree of difficulty, taught with attention to organization, rhetoric, and diction. The student would write papers interpreting or commenting upon short stories, poems, essays, plays, or novels read during the course.

On the basis of these observations, the author believes that the traditional freshman composition program ought to be revised to find a more effective, easier, and pleasanter way to teach freshmen to write.

"New York's Trade School for Stage-Struck Kids." By May Natalie Tabak. *The Reporter*, April 4, 1957.

The article describes the unusual educational opportunities for talented youth in one of the city's specialized public high schools. Principal Keller's School for Performing Arts combines college preparatory education with training for professional work in drama, dance, and music. More than a thousand apply for admission each year from the city's elementary and junior high schools but the present facilities limit the enrollment to six hundred. The criterion for admission is talent displayed at annual auditions held at the school.

By eliminating study periods and operating on a thirty-hour week, the school enables its students to meet the minimum requirements for college and still participate in a full program of "performing arts." The author reports that the holding power of this special school exceeds that of the academic high school.

The arts which are generally neglected in American high schools had their origin as specialized courses in 1937 when Dr. Keller initiated the city's first music program. Current plans for this school call for a large, functional building and an expansion of other related branches of the performing arts.

"Toward Economic Literacy." By Baldwin Lee and Galen Jones. *NEA Journal*, April, 1957.

"The widespread economic ignorance" of American people has focused attention upon economic education in high schools. NEA's Council for Advancement of Secondary Education is engaged in research and writing to establish a feasible program of economic education for high-school students. The chief objectives of the program are the acquisition of essential understandings and skills for effective performance of citizen-consumer functions and the familiarity with economic terminology sufficient for intelligent newspaper and magazine reading.

To determine the key understandings in economics, the Council has sought the views of major economic groups. Another project was a study of current publications to discover what basic vocabulary the general reader should possess. As a result of these preliminary studies, two booklets in the Economic Literacy Series have been written and are available for experimental use in high schools. These booklets aim to give students an insight into the structure and achievements of American capitalism. Future booklets were present units on specific aspects of American economy.

New Teaching Aids

● *Edited by Joseph J. Urbancek*
Chicago Teachers College

Films

A Story of Silver. 1 reel. 16 mm sound. 20 minutes. Black and white, rental, $4.50; sale, $85. Produced in Denmark under the sponsorship of Georg Jensen. Available through Film Center, Inc., 64 W. Randolph St., Chicago 1, Ill.

Following a quick survey of the unique role silver has played in man's history, this excellent documentary takes us into the Georg Jensen workshops. There we see designers and craftsmen demonstrating every phase of silver making. Several approaches to design in silver (and by extension to design in other materials) are demonstrated: working from carefully prepared preliminary drawings, working directly in the silver, working from more-or-less abstract free rhythms which are then translated into silver. A sequence of fine close-ups toward the end reveals the sensitive feeling for good form and the fine craftsmanship of traditional and modern design in silver, with an emphasis on the modern. Useful from junior high on up, either for specialized classes or for general design study with art appreciation as a goal. John W. Emerson

World of Little Things. 1 reel. 16 mm sound. 15 minutes. Color, $120. Moody Institute of Science, Educational Film Division, 11428 Santa Monica Blvd., West Los Angeles, Calif.

Beginning with a brief resume of the history of the microscope and Leeuwenhoek's work this film shows by photo-micrography and time-lapse photography various types of microscopic life, plants and animals, in fresh and salt water.

The photography and color are superb and the examples shown are interesting. To be recommended for the senior high school level with the following criticisms: The attribution of the invention of the microscope to Zacharias Jansen is open to some question as others before him had used the principles of microscopy. Although the placement of *Volvox* in the animal kingdom has precedent, it is nevertheless incorrect, and to refer to rotifers, by implication, as crustaceans must be unique! The film ends with a rather awkward religious non sequitur.

Paul W. Titman

Characteristics of Plants and Animals. 1 reel. 16 mm sound. 10 minutes. Black and white, $50; color, $100. Indiana University Productions, Audio-Visual Center, Indiana University, Bloomington, Ind.

This film, one of the Continuity of Life Series, may be used to excellent advantage in a beginning biology course at either the high school or college level. The introduction effectively presents Pasteur's investigations disproving the then widely held theory of spontaneous generation. Following this, the film shows and contrasts the behavior properties and cell structure of plants and animals in a highly interesting and lucid fashion. It is unfortunate that more films of the caliber and usefulness of this one are not generally available, especially for college audiences. A more generous use of printed captions and summaries would have enhanced the film considerably. Herbert F. Lamp

Human Mechanism. 1 reel. 16 mm sound. 10 minutes. Black and white, $55; color, $115. Moody Institute of Science, Educational Film Division, 114 Santa Monica Blvd., West Los Angeles 25, Calif.

This film presents, simply, superficially, and in beautiful color, the workings of the skeleton, muscles, digestive, circulatory and nervous systems. The relation between structure and function seems to be well illustrated only in the ear. The film stresses the remarkable mechanisms of the human body as part of the wonderful pattern of nature. However, if this is a film for teaching science, more facts and less philosophy would be required unless it is to be used only at the lower and intermediate grade levels.

Esther Da Costa

Safety on the Playground. 1 reel. 16 mm sound. 14 minutes. Black and white, $62.50; color, $125. Collaborator: Dr. Herbert J. Stack. Available through Encyclopaedia Britannica Films, 1150 Wilmette Ave., Wilmette, Ill.

An excellent film for fourth, fifth and sixth grade boys and girls. Treating the field of playground safety, it emphasizes positive safety practices without moralizing. It particularly points up safe practices in catching and batting softballs and in playing on seesaws, slides, and swings. The actors are school children, which makes the film even more convincing. Ursula Blitzner

How To Take a Test. 1 reel. 16 mm sound. 10 minutes. Black and white, $50. Young America Films, Inc., 18 E. 41st St., New York 17, N. Y.

The purpose of this film is to help students in the upper grades and high school to learn how to prepare for and take tests in school. The film presents a recommended procedure that, if used, will greatly improve student performance on examinations.

Such valuable suggestions as reviewing early, organizing notes on important points, writing out answers to questions that may be asked, reading test directions carefully, and organizing thoughts and time for the taking of examinations are simply and effectively shown. A "Teacher's Guide" contains a statement of the teaching points in the film, the basic narration of the film, and some additional related material.

Louise L. Tyler

Fundamental Operations. 16 mm sound. 30 minutes. Black and white, $100; rental, $3.50. Presentation by Philip S. Jones. Available through Audio-Visual Center of Indiana University, Bloomington, Ind.

This film shows how modular arithmetic may aid in the understanding of our own rational arithmetic. The closest thing to modular arithmetic is arithmetic on the clock where of course the modulus is twelve. Through arithmetic modulo five are shown the closure, commutative, and identity element principles of rational arithmetic and the additional associative and distributive arithmetic principles are identified using our own arithmetic. It also demonstrates that the two fundamental operations are addition and multiplication and that subtraction and division are the inverse of these operations, and that addition and multiplication tables limited in size by place values, are required to perform the fundamental operations.

The properties of arithmetic modulo 6 are also shown. Mature students who have had some experience with arithmetic on the clock should find the film very profitable.

Ruth B. Rasmusen

Posture and Exercise. 1 reel. 16 mm sound. 11 minutes. Black and white, $50. Collaborator: Arthur H. Steinhaus. Produced by Encyclopaedia Britannica Films, 1150 Wilmette Ave., Wilmette, Ill.

This scholarly presentation of the topic is developed through the physiological processes involved. Of greatest interest to the average secondary school student would be the fourth sequence concerning corrective exercises.

The highly scientific material and erudite vocabulary is suited to the college student, at which level the film might better fulfill its purpose. Gertrude Byrne

The Electric Eel. 1 reel. 16 mm sound. 12 minutes. Black and white, $45; color, $90. Available through Moody Institute of Science, Educational Film Division, 11428 Santa Monica Blvd., Los Angeles 25, Calif.

This film treats the electric eel more as a curiosity than as a striking physiological adaptation of the muscular organs into electric organs by evolutionary change. None of these fishes belong to the carp family as the commentator implied when he said "carp or catfish family." Electric fishes are not blind because they have "heavy cataracts" on or over their eyes. Cataracts are internal. The genus name of the fish, Electrophorus was mispronounced.

This film might be shown to any group from junior high school to college as a novelty. Its educational content is not extensive. Some of the religious sentiments included may be deemed not appropriate in films to be exhibited in public schools.

James M. Sanders

Fish Out of Water. 1 reel. 16 mm sound. 11 minutes. Black and white, $50; color, $100. Available through Moody Institute of Science, Educational Film Division, 11428 Santa Monica Blvd., Los Angeles 25, Calif.

A protrayal of the reproductive behavior of the grunion, a small fish inhabiting the California coast. The early development is sketchily traced, through photomicrography and time-lapse photography, from the fertilized egg to hatching of the fry. The film vastly overrates the ability of the grunion to time exactly the "correct" hour to spawn.

Selection of title is poor, as is the notion that precise reproductive behavior is an intelligent provision for survival. In general, the film has entertainment value but offers little toward a better understanding of the world around us. However, the close-up photography of grunion spawning is excellent. Suitable for elementary, junior high and senior high, but leaves much to be desired at the college level.

Francesco B. Trama

Plant Life at Work. 1 reel. 16 mm sound. 10 minutes. Color, $90. Moody Institute of Science, Educational Film Division, 11428 Santa Monica Blvd., Los Angeles 25, Calif.

The photography is excellent. However, a telelogical and purposeful implication for plant behavior is an unacceptable point of view in the opinion of this reviewer. Roots do not search for water. Since the film has little or no scientific value, it is not recommended for the classroom. O. J. Eigsti

How Many Stars. 1 reel. 16 mm sound. 11 minutes. Black and white, $45; color, $90. Available through Educational Film Division, Moody Institute of Science, 11428 Santa Monica Blvd., Los Angeles 25, Calif.

An excellent general film for astronomy. The emphasis on the scale of distances and sizes in space is very good and the comparisons quite dramatic. There is a brief discussion of the solar family with a greater emphasis on other galactic systems. This film is probably most suitable for high school level. The commentary contains a couple of minor references to a religious basis for astronomy, and these may be slightly objectionable to the teacher who wishes to keep science separate from theology.

John J. Bowen

Tree Portraits. 16 mm sound. 21 minutes. Color, $125. Produced by State University of New York, College of Forestry, Extension Department, Syracuse 10, N. Y.

The film is well done from a technical point of view. The time-lapse is very good. From one season to the next, trees are identified, with the important features photographed. A sequence of bud identification is excellent. This film should be useful in advanced classes in high school and at the lower college level. O. J. Eigsti

Filmstrip

School Bus Safety, 64 frames. Black and white, $3. Produced by Visual Sciences, Box 599 CS, Suffern, N. Y.

Through the use of a cartoon format, this filmstrip on bus safety practices will find its greatest use in the instructional program of schools where daily bus transportation of pupils is a challenging and serious problem. A good set of "don'ts" for school children to read along with some discussion-stimulating cartoon illustrations make this film one answer to a real administrative problem, especially in rural school districts.

Lawrence James McBride

Recording

Lewis Carroll, excerpts read by David Kurlan. 3¾ i.p.s. dual-track tape. About 30 minutes per track. $6.95. Distributed by Phonotapes, Inc., 242 W. 49th St., New York 19, N. Y.

On track one David Kurlan gives a truly professional interpretation of "Father William," "Mock Turtle," "Lobster Quadrille," and "Beautiful Soup," from *Alice in Wonderland;* and of "Jabberwocky," "The Walrus and the Carpenter," "Humpty Dumpty," and "The White Knight," from *Through the Looking Glass.* Track two is entirely devoted to a very fine reading of "The Hunting of the Snark." Mr. Kurlan, a seasoned actor, is an oral reader par excellence for these Lewis Carroll classics. Each character is carefully differentiated and artistically projected. The whole thing is a delightful romp, just as it should be. Eminently suitable for children of all ages.

Carl Lefevre

Important New Books

● *Edited by Louise M. Jacobs*
Chicago Teachers College

For Teachers and Supervisors

Education and the Social Order. By Blaine E. Mercer and Edwin R. Carr. Rinehart and Co., 232 Madison Ave., New York 16, N. Y., 1956. Pp. 608. $6.00.

This is a carefully selected volume of readings in education which is more definitive than similar sociological anthologies. Based on a cross-disciplinary approach, some seventy studies are used to focus attention upon perennial questions about education. Included in the selected readings are significant articles by anthropologists, psychologists, sociologists, and educators. The stated theme is that education is a social process which must be studied as a functioning part of the whole complex of human behavior in order to fully reflect community purposes. The social aspects of the educational process are presented in two parts. In part one the sociologist's point of view is expressed in describing the relations and theories of the socialization process, social stratification, disorganization and change, as these relate to education. Part two is presented as educational sociology, dealing with the nature, functioning, and problems of American education. Each chapter is prefaced by short, editorial remarks. Particularly valuable in foundation or introductory courses in education. John M. Beck

Education Faces New Demands. By Francis S. Chase. University of Pittsburgh Press, Pittsburgh 13, Pa., 1956. Pp. 49. $1.00.

This Horace Mann lecture gives a concise analysis of the demands which the evolving age of automation is making on education. Ways must be found to narrow the distance between technological change and social invention and this will require a "heavy investment of thought" and an "outpouring of resources." To realize the desired goals, American people must be willing to pay more for the educational endeavor. The brief text presents an excellent, thorough statement of the major problems which must be solved if American schools are to make a full contribution to tomorrow's society.
John M. Beck

The Teacher's Personal Development. By William F. Bruce and A. John Holden, Jr. Henry Holt and Co., 383 Madison Ave., New York 17, N. Y., 1957. Pp. 346. $4.25.

This book emphasizes the social-personal development of the teacher as it affects his competence in the classroom. Because today's teacher emerges from diverse social, cultural, and economic origins, the alert practitioner must develop self-awareness and a sense of empathy for all concerned in the teaching-learning process. This presentation of the complementary aspects of the whole teacher and the whole child in the educational process is a significant and refreshing contribution to the literature.
Wesley F. Amar

The Children's Illustrated Encyclopedia of General Knowledge. Philosophical Library, 15 E. 40th St., New York 16, N. Y., 1957. Pp. 480. $4.95.

This volume, printed in England, is of limited use. The many authors are identified by name only; their qualifications are not listed. The contents are divided into sections making the information easy to find; the full-page colored illustrations are excellent. Expressions, spelling, and interests are predominantly British. This book would have little value in a school library where funds are often not adequate to purchase even "necessary" books. Kathleen O'Shea

For the Kindergarten and Primary Grades

I Want To Be Series. By Carla Greene. Childrens Press, 310 S. Racine Ave., Chicago 7, Ill., 1957. Pp. 30 each. $2.00 each.

I Want To Be A Bus Driver. Illustrated by Katherine Evans.

To be a bus driver is an ambition close to the hearts of many little boys. They will be interested in some of the things a man learns before getting behind the wheel of a city, school, or cross-country bus. Two-color drawings illustrate Johnny's three bus trips. The text, as is true of others in this series, has a vocabulary fitted to the reading abilities of the first grader.

I Want To Be A Dairy Farmer. Illustrated by Frances Eckart.

A farm boy comes to the city to visit two friends and discovers how milk is processed for distribution. Andy's city friends learn where the milk comes from when they make a return visit to Andy's home. Realistically illustrated, this book is within the interest span and reading level of the first and second grade child. Worth adding to a bibliography on farm or dairy units.

I Want To Be A Fisherman. Illustrated by Lucy and John Hawkinson.

Sam wants to be a tuna fisherman. This colorful story gives a brief but authentic view of a little known occupation, its boats, and its equipment. Full of new concepts and understandings for the average first grader, the book is nevertheless one which he can read for himself.

I Want To Be A Nurse. Illustrated by Becky and Evans Krehbiel.

Miss Baker, the helpful nurse, shows Jane how to aid her sick doll while telling her about all of the things a girl must learn and do before she becomes a "real nurse." The material is interesting and factual, with the single exception of an unnecessary pictorial implication that storks bring babies. The text has been carefully geared to primary reading abilities. Roberta H. Kruchten

Three Little Animals. By Margaret Wise Brown. Illustrated by Garth Williams. Harper and Bros., 49 E. 33rd St., New York 16, N. Y., 1956. Pp. 31. $3.25.

An enchanting story about three bears who become curious about the world of people. Soft-toned, delightful illustrations and large type print make this picture book a must for the primary library table.
Elinor Eklund

The Birthday Party. By Ruth Krauss. Illustrated by Maurice Sendak. Harper and Bros., 49 E. 33rd St., New York 16, N. Y., 1957. Pp. 14. $1.50.

Birthdays are great fun, especially when you are five years old and have never had a real birthday party of your own. David has just such a happy event. His adventures as he walks into his very own surprise birthday party will endear this delightful tale to all young children. The author has caught the spirit of a young child's pleasure in surprise and the artist carries out the idea in simple line drawings. Viola M. Lynch

Dear Garbage Man. By Gene Zion. Illustrated by Margaret Bloy Graham. Harper and Bros., 49 E. 33rd St., New York 16, N. Y., 1957. Unp. $2.75.

Stan, the new garbage man, tied a discarded floral horseshoe to the front of his truck and away he went. Instead of tossing trash into the "chewer-upper," Stan wanted to save everything. To the top of the truck he tied a broken couch, a cracked mirror, an old awning, and dozens of other things until the truck itself could scarcely be seen. How he got rid of all this wonderful rubbish makes an amusing story which will appeal to five- and six-year-olds who themselves are great collectors. Delightful, humorous illustrations. Mabel G. Hemington

Very Far Away. Written and illustrated by Maurice Sendak. Harper and Bros., 49 E. 33rd St., New York 16, N. Y., 1957. Pp. 52. $2.00.

A variation on the theme "the grass is always greener on the other side of the fence," this story takes little Martin, a refined sparrow, a dreamy horse, and a singing cat to "very far way." After a brief hour and a half they discover that even there questions go unanswered, people raise their voices, dreamers are disturbed, and singers are hushed. Little boys who delight in disguises will find a kindred spirit in Martin. The dialogue among the four runaways will provoke much laughter from listeners four to six years of age. The illustrations are in the delightful Sendak style.
Jeanne Connelly

Come to the Country. Written and illustrated by Grace Paull. Abelard-Schuman, 404 Fourth Ave., New York 16, N. Y., 1956. Unp. $2.50.

This book, illustrated in a gay mood, simply describes what the reader will see if he goes to the country. A colorful invitation bearing the author's own enthusiasm for the out-of-doors.
Mabel G. Hemington

For the Middle Grades

Trucks and Trucking. Written and illustrated by Walter Buehr. G. P. Putnam's Sons, 210 Madison Ave., New York 16, N. Y., 1956. Pp. 72. $2.50.

In this short and well-balanced book the author presents a remarkably complete and interesting picture of the many types of trucks, their development, and the services they perform. In so doing he also emphasizes the striking changes wrought in our landscape and in our ways of life in the past fifty years by these and other developments in transporation. The excellent drawings are instructive as well as attractive. For ages eight to twelve. Robert S. Langley

Fun-Time Window Garden. Written and illustrated by Emogene Cooke. Childrens Press, 310 S. Racine Ave., Chicago 7, Ill., 1957. Pp. 34. $2.50.

Springtime can be a fun time when you make a window garden such as the one suggested here. The how, what, and when of germinating seeds, making cuttings, sprouting sweet potatoes, and planting many other growing wonders is concisely discussed and illustrated. The primary teacher who uses the book as a guide will appreciate the clearly defined "Things You Need," "What To Do," and "What To Watch For." The independent reader will enjoy the fairly simple vocabulary and easy-to-follow instructions. Here is an answer to a springtime science need of the teacher without the green thumb.
Roberta H. Kruchten

Comets. By Herbert S. Zim. Illustrated by Gustav Schrotter. William Morrow and Co., 425 Fourth Ave., New York 16, N. Y., 1957. Pp. 64. $2.25.

Another excellent book by an authority on science education. Almost every page has a clear informational illustration. The deep blue of the pictures give the feeling of astronomy so effectively. Upper grade pupils will find it an interesting and helpful book for both classroom and hobby study.
Emilia F. Polerecky

The Indians Knew. By Tillie S. Pine. Illustrated by Ezra Jack Keats. Whittlesey House, 330 W. 42nd St., New York 36, N. Y., 1957. Pp. 32. $2.00.

A book that will be welcomed by teachers in the intermediate grades. Here is nonfiction that reads like a story, while clearly informing the reader of the many contributions of the Indian to our society. The format will entice reluctant readers and young scientists will read and reread it. Primary teachers will find it useful for reading aloud to young children to give them an appreciation of the contribution of the Indian. Excellent as a source for building good human relations. It will also serve many other curricular needs. Highly recommended.
Louise E. Dieterle

A Song for Gar. By Jean Merrill. Illustrated by Ronni Solbert. Whittlesey House, 330 W. 42nd St., New York 36, N. Y., 1957. Pp. 32. $2.25.

Absalom is the only one of the Marvell clan who cannot sing sweetly. But it is scratchy-voiced Absalom who makes up the song with which his brother Gar pleases everybody at the Song Swapping. Familiar plot elements are nicely recombined in this simple but satisfying little story. Narrative as well as dialogue has the ring of Kentucky hill-folks' talk. For eight- to eleven-year olds. Jacqueline Krump

Did You Feed My Cow? By Margaret Taylor. Illustrated by Paul Galdone. Thomas Y. Crowell Co., 432 Fourth Ave., New York 16, N. Y., 1956. Pp. 85. $2.75.

A collection of rhymes and games currently chanted and played by American children. The short introduction contains a few general remarks on the origins of call and response games, the play party, and the bouncing-ball and jump-rope rhymes. Publishing this collection as a juvenile seems ill-advised; few children will turn to a book to enlarge their repertoire of street games. The collection may be of interest to recreational directors and to students of folklore and should have been designed for them.
Jacqueline Krump

Rolling Show. By Virginia Frances Voigt. Illustrated by Kurt Wiese. Holiday House, 8 W. 13th St., New York 11, N. Y., 1956. Pp. 188. $2.50.

The world under the Big Top holds unfailing appeal for young readers. They will follow the sawdust trail eagerly with Clay, the boy who "had a way with animals." The story, full of action and excitement, reaches a gripping climax when Clay risks his life to recapture a young zebra, the first wild creature he had ever tamed, stolen by thieves from a rival circus. The book abounds in the give and take of good living among those who share hardships and dangers. Its pages are enriched by excellent illustrations. Mary E. Courtenay

Blue-Nosed Witch. By Margaret Embry. Illustrated by Carl Rose. Holiday House, 8 W. 13th St., New York 11, N. Y., 1956. Pp. 48. $2.00.

A humorous, fanciful Halloween tale suitable for grades three through five. Children will appreciate the modern touch and humor of Grand Madame, who travels on a vacuum cleaner instead of the usual witch's broom. Blanche, the young scatter-brained witch with the blue neon-lighted nose, becomes the star of a group of children out for an evening of trick-or-treat. There is need for this humorously illustrated story in every library.
Marie Z. Cole

Sport Stories

Reviewed by Mary McAuliffe and Kathleen O'Shea

Buzzy Plays Midget League Football. By Caary Jackson. Illustrated by Kevin Royt. Follett Publishing Co., 1000 W. Washington Blvd., Chicago 7, Ill., 1956. Pp. 112. $2.00.

Buzzy's enthusiasm for the newly formed midget league football team is overshadowed by the loss of his dog, Panther. The gift of a new puppy changes Buzzy's outlook and aids in his growing-up process. For middle grades.

The Team That Wouldn't Quit. By William Mac Kellar. Whittlesey House, 330 W. 42nd St., New York 36, N. Y., 1956. Pp. 160. $2.75.

Doug Mason, Captain of the Colville quintet, has a one-track mind when it comes to basketball. It takes a near tragedy to teach him that while the team is important, individuals have rights too. Recommended for upper grades.

Half-Time Hero. By Curtis Bishop. The Steck Co., 9th and Lavaca Sts., Austin 1, Tex., 1956. Pp. 208. $2.00.

In following Bob Nelson's leadership Hal Conroy has ceased to think of himself. A surprising turn of events jolts him out of his complacency and he is forced to make his own decisions. Recommended for upper grades.

Lucky Bat Boy. By Frank Waldman. Illustrated by Frank Kramer. World Publishing Co., 2231 W. 110th St., Cleveland 2, Ohio, 1956. Pp. 216. $2.75.

Matt Cooper makes his way back into the big leagues and again becomes a valuable player. Billy, the fifteen year old bat boy, proves a faithful friend. The story is not convincing but some upper grade boys may find the behind-the-scenes adventures interesting.

A Fighting Chance. By Jackson Scholz. William Morrow and Co., 425 Fourth Ave., New York 16, N. Y., 1956. Pp. 222. $2.75.

Jim Carter faces a desperate situation when he becomes football coach at his Alma Mater, Granger College. Lack of team spirit, aggravated by the subversive tactics of his former teammate, Cy Linker, presents a challenge which might well have daunted an older, wiser man. How he succeeds in winning the loyalty of his players and by using good judgment outmaneuvers Cy Linker is presented in an excellent story recommended for teen-agers.

Dribble Up. By Curtis Bishop. The Steck Co., 9th and Lavaca Sts., Austin 1, Tex., 1956. Pp. 191. $2.00.

Taught to overcome his handicap Ed McCabe returns to Milburn High to show what a fine athlete he has become. A valuable lesson in teamwork is learned before Ed loses his "chip on the shoulder" and is accepted by the group. A good story for young teen-age basketball fans.

Basketball Clown. By C. P. and O. B. Jackson. Illustrated by Robert Henneberger. McGraw-Hill Book Co., 330 W. 42nd St., New York 36, N. Y., 1956. Pp. 160. $2.75.

Fred, captain of the Valley High Team, is disturbed at the feuding of two top players. Disagreements are smoothed out before the end of the final tournament game and Fred learns a much needed lesson. Upper grade basketball fans will enjoy reading about the exciting games in the high school tournaments. Illustrations are very good.

Joe Di Maggio. By Gene Schoor. Julian Messner, 8 W. 40th St., New York 18, N. Y., 1956. Pp. 192. $2.95.

This story of the career of a famous ball player will prove an inspiration to his young admirers. Despite physical setbacks Joe reaches the top and is voted into the Hall of Fame. Sidelights on his family, description of World Series games, and photographs will appeal to high school boys and girls. Easy to read.

Go Navy Go. By Joe Archibald. Macrae Smith Co., 225 S. 15th St., Philadelphia 2, Pa., 1956. Pp. 192. $2.75.

Navy traditions finally soften the hard shell which Jim Dorrance has built around himself. Although the plot is familiar this story of Annapolis will appeal especially to football fans. They will like the play by play description of the navy games, climaxed by the exciting Army-Navy game. For high school boys.

Ball of Fire. By Earl Schenck Miers. Illustrated by Paul Galdone. World Publishing Co., 2231 W. 110th St., Cleveland 2, Ohio, 1956. Pp. 220. $2.50.

A series of sensational episodes bordering on the melodramatic coupled with the stereotyped portrayal of one of the principal characters makes this a book of doubtful value.

For the Upper Grades

Insect Engineers: the Story of Ants. Written and illustrated by Ruth Bartlett. William Morrow and Co., 425 Fourth Ave., New York 16, N. Y., 1957. Pp. 128. $2.75.

This fascinatingly written and illustrated book has high informational value and appeal. The resemblance of ants to people in so many ways, good and bad, is strikingly described and pictured. The last chapter gives detailed and very practical suggestions on how to collect ants, place them in glass nests, and watch their activities. For upper grades, although many adults will also enjoy this presentation. Emilia F. Polerecky

Faster and Faster. By Raymond F. Yates. Harper and Bros., 49 E. 33rd St., New York 16, N. Y., 1956. Pp. 146. $2.50.

This is a lively account of the speed of objects from racehorses to projectiles. The first chapter emphasizes the principle that all speeds are relative and that the reader must imagine a motionless earth. The relationship of time and distance might be better established. This book would be most suitable for upper elementary grades if it were not for the liberal sprinkling of factual and scientific errors throughout.

John J. Bowen

Our American Trees. By Ruth H. Dudley. Illustrated by Nils Hogner. Crowell Co., 482 Fourth Ave., New York 16, N. Y., 1956. Pp. 147. $2.50.

This book is an example of a well-written text that will be read and widely accepted by elementary teachers. It is unfortunate that chapters one to three are included. Specifically, plants do not breathe, do not have a spinal column, and are not constructed at all in the manner illustrated in the first three chapters. Such writing is what might be called science fiction. Is that what the writer had in mind? The libraries would be better served if this book were never written. Orie J. Eigsti

Famous Voyages in Small Boats. By John Merrett. Illustrated by Paul Berkow. Criterion Books, 275 Fourth Ave., New York 10, N. Y., 1957. Pp. 188. $3.00.

These six shortened versions of such well known adventures as Kontiki and Captain Bligh of the Bounty and lesser known stories of Slocum's trip around the world alone and Shackleton's escape from the Antarctic will hold the attention of upper grade boys to the victorious end. Pen sketches are in keeping with the atmosphere and add to the excitement. Laura M. Light

William Bent and His Adobe Empire. By Shannon Garst. Julian Messner, 8 W. 40th St., New York 18, N. Y. Pp. 182. $2.95.

How William Bent, an early American pioneer, was able to fulfill boyhood dreams of adventure and exploration and at the same time contribute to the expansion of the United States is related in this well written biography. The adventures of Bent in meeting with the Cheyennes and Comanches will be profitable and exciting reading for young people anxious to learn more of the early New Mexico Territory. There is fine bibliographical material consisting of both books and periodicals. Cassin F. Graham

Desert Dog. By Jim Kjelgaard. Holiday House, 8 W. 13th St., New York 11, N. Y., 1956. Pp. 200. $2.75.

Another of Kjelgaard's good dog stories, this one with little plot, but as one student who read it said, "a character study of dogs." Good, and easy reading for the junior high school level. Ruth Dawson

Ahoy, Peggy Stewart! By Maud Esther Dilliard. Illustrated by Lorence F. Bjorklund. E. P. Dutton and Co., 286 Fourth Ave., New York 10, N. Y., 1956. Pp. 120. $2.50.

Eight-year-old Toby observes the disastrous effects of the Tea Act on an Annapolis ship owner in 1774. In this rather pedestrian account there is background material for understanding colonial rebellion against the tax on tea which might be useful for intermediate grade groups or for slower older readers who are studying preludes to the Revolutionary War. Marcella G. Krueger

The White Elephant. By Pauline Clarke. Illustrated by Richard Kennedy. Abelard-Schuman, 404 Fourth Ave., New York 16, N. Y., 1957. Pp. 145. $2.50.

In present day London, Alister and his sister Georgina go on an outing with their older cousin, Nona. The story starts out prosaically enough with a visit to the British Museum, but a swift-moving adventure soon follows. All the elements of a good mystery are present in this story which takes place during one action-packed day. The dialogue, flavored with peppery "Britishisms," will appeal particularly to American readers. The central characters are very much the type of people you'd like to know — intelligent, witty, and adventurous. Highly recommended for all "who done it" fans from eleven to eighty. Jeanne Connelly

Teen-Age Tales. Book 4. By Ralph Roberts and Walter Barbe and *Teen-Age Tales.* Book 5. By Regina Heavey and Harriet L. Stewart. D. C. Heath and Co., 285 Columbus Ave., Boston 16, Mass., 1957. Pp. 248 each. $2.40 each.

Carefully selected collections of stories with a high school interest level and a fifth to sixth grade reading level. Length of stories range from three to seventeen pages and cover all reading interests from animal and adventure stories to sports and teen-age romance. Gladys A. Berg

For the High School

Our American Government. By Stanley E. Dimond and Elmer F. Pflieger. Illustrated by Franklin McMahon. J. B. Lippincott Co., 333 W. Lake St., Chicago 6, Ill., 1957. Pp. 585. $4.20.

This book covers the essentials of both civics courses at the twelfth grade level, but the wording is planned to meet the needs of the retarded readers. The first unit skillfully gives the student the basic ideas of democracy and its sources. From this the plan of government at the national, state, county and city levels evolves. The final unit contains social problems such as labor and business, housing, crime, and social welfare. The authors draw heavily on the basic texts approved for the Chicago high schools. Word guides, summaries, study and discussion questions as well as things to do are listed at the end of each chapter.

Geraldine O'Malley

To Be an American. By Frank F. Bright. J. B. Lippincott Co., 333 W. Lake St., Chicago 6, Ill., 1957. Pp. 636. $3.80.

Organized in six instructional units suggesting the development of the United States, this anthology includes a variety of selections both traditional and contempory, with emphasis on the latter. The book is aimed to capture the interest of high school students differing widely in reading tastes and ability; perhaps no book so designed can be completely successful. In format the volume is attractive, with the photographic type of illustration and with readable pages. In organization, however, the book leaves much to be desired at least for the student and teacher needing to make quick reference to authors and to selections by types. The index is arranged alphabetically only by titles. Some of the pages, a total of forty-six, presenting unit tests might better be devoted to a more complete and helpful index.

Eona DeVere

Chemistry for Progress. By L. E. Young and W. M. Petty. Prentice-Hall, 70 Fifth Ave., New York 11, N. Y., 1957. Pp. 581. $4.68.

This is one of the better chemistry texts for high school use. It represents a reversal of the trend of substituting expensive color photographs of paint mixing for the discussion of chemical principles. This is a well-organized presentation of the descriptive chemistry of the elements. There is some objection to separating quantitative ideas to be used at a teacher's discretion. They become a concentrated dose for better students and are easily ignored for a poor class.

John J. Bowen

Prehistoric Animals. By Sam and Beryl Epstein. Illustrated by W. R. Lohse. Franklin Watts, 699 Madison Ave., New York 21, N. Y., 1956. Pp. 210. $3.95.

A comprehensive outline of ancient animal life, relating geological events which influenced the development of animal forms. The authors avoid the "isn't-science-wonderful" style and admit the existence of unresolved controversies. Useful reference for grades eight through ten.

John J. Bowen

Sea Treasure. By Kathleen Yerger Johnstone. Illustrated by Rudolf Freund and Rene Martin. Houghton Mifflin Co., 2 Park St., Boston 7, Mass., 1957. Pp. 242. $4.00.

A discussion of the various kinds of shells, when and where they can be found, and how to care for them. In addition, there is material on the animals living inside the shells and on the historical uses of shells, all presented in a lively, entertaining style that makes the book much more than just a manual. Illustrated with beautiful color plates, drawings, and diagrams. Useful both as a guide to shell collectors and as supplementary reading for high school biology classes.

Dorothy Schumacher

Ships in the Sky. By John Toland. Henry Holt and Co., 383 Madison Ave., New York 17, N. Y., 1957. Pp. 352. $4.95.

Humor, excitement, suspense, and tragedy are all generously and masterfully interwoven in this story of the big dirigibles. The reader is, in effect, taken along on the flights of the motorless "gas bags" of the Civil War period, the crude contraptions of Santos-Dumont, and the great Zeppelins, the Norge, Italia, Akron, Macon, Shenandoah, and finally the Hindenburg. One relives with the crews the intimate exchange of conversation, the anxiety and hope, and finally the last tragic moments as many of these great ships meet with catastrophe. Well chosen photographs mark the highlights of the text. A must for anyone who would know the history of man's attempts to conquer the skies. For all over twelve.

Robert S. Langley

Points for Decision. By Harold J. Mahoney and T. L. Engle. World Book Co., 313 Park Hill, Yonkers-on-Hudson 5, N. Y., 1957. Pp. 566. $4.08.

An informative, straightforward presentation and analysis of specific personal, social, and vocational problems perplexing high school youth today. Each topic is addressed directly to the student and developed through a series of posed questions and familiar situations. Psychological principles and applications are introduced as they reinforce points of discussion. Format, language, and approach make this book suitable for the mature student.

Alice S. Gordon

Chicago Schools Journal

An Educational Magazine for Chicago Teachers

Edited at the Chicago Teachers College,
6800 Stewart Avenue, Chicago 21, Illinois

Volume XXXVIII, Nos. 1-10

September, 1956---June, 1957

Editorial Staff

Editor	Raymond M. Cook
Managing Editor	Irwin J. Suloway
News	George J. Steiner
Periodicals	John M. Beck
Teaching Aids	Joseph J. Urbancek
Books	Louise M. Jacobs
Art	Coleman Hewitt
Secretary	Elizabeth H. Mans

Published by the Board of Education, City of Chicago

R. Sargent Shriver, Jr., President

Benjamin C. Willis, General Superintendent of Schools

Alfred E. Bolt, Edwin A. Lederer, Thaddeus Lubera, Don C. Rogers
James H. Smith, Associate Superintendents

Printed and Bound at the Board of Education Press
Under the Direction of Michael A. Kenneth

Reviewing Staff

The following individuals have contributed reviews of books and teaching aids to Volume XXXVIII.

Benedict Amar
Wesley F. Amar
Fred O. Anderson
Hedda Aufricht
Bernice J. Austrheim
John M. Beck
Gladys A. Berg
Frederic C. Berezin
Elinor Bisbee
Ursula Blitzner
John J. Bowen
Fred K. Branom
Frederick S. Breslin
Vernon W. Brockmann
Olive P. Bruner
George E. Butler
Margatet Taylor Burroughs
William Card
Agatha Cavallo
Joseph C. Chada
Eve K. Clarke
Mary Cole
Jeanne Connelly
Olivia M. Cooke
James Steve Counelis
Mary E. Courtenay
Thomas J. Creswell
Edmund D. Crosby
Ruth Dawson
Ruth H. Dennis
Eona DeVere
C. Wallace Diereckx
Louise E. Dieterle
Mary S. Dunn
O. J. Eigsti
Elinor Ecklund
John W. Emerson
Max D. Engelhart
John F. Etten
Henrietta H. Fernitz
Morris Finder
Mark Frank
Marcella F. Friedman
Norman A. Goldsmith
Alice S. Gordon
Madelyn G. Gorman
Cassin F. Graham
Russell A. Griffin
Paul E. Harrison
David H. Heller
Mabel G. Hemington
Elizabeth R. Hennessey
Edna C. Hickey
Louise M. Jacobs
Isabel M. Kincheloe
R. Bruce Kirk
David Kopel
Vaso Krekas
M. H. Krout
Roberta H. Kruchten
Marcella G. Krueger
Jacqueline Krump
Herbert Lamp
Robert S. Langley
Carl Lefevre
Emilie Lepthien
Robert Levin
Ely M. Liebow
Laura M. Light
Viola Lynch
Doris R. McAllister
Mary McAuliffe
Betty Lou McBride
Jacqueline Meyers
Oscar V. Mongerson
Charles R. Monroe
Mary T. Moran
Barbara Mueller
Ellen M. Olson
Geraldine O'Malley
Kathleen O'Shea
Blanche B. Paulson
Dorothy V. Phipps
Emilia F. Polerecky
W. J. Purcell
Mary T. Prendergast
Margaret Racky
Ruth B. Rasmusen
Mark Reinsberg
Dorothy F. Roberts
Charlemae Rollins
Jerome Sachs
James M. Sanders
Margaret S. Sandine
Dorothy Sauer
Dorothy Schumacher
Leonard J. Simutis
Ella Marth Snader
Sonya Ferthal Spiesman
LaVancha M. Stalmok
Bessie Stenhouse
Kathryn Steinmetz
Irwin J. Suloway
Paul W. Titman
Cyril Trayford
Louis L. Ullman
Joseph J. Urbancek
Ralph Vesecky
Robert J. Walker
Sylvan D. Ward
Rosemary Welsh
Horace Williston
Maurice Yochim
Gus Ziagos

September, 1956---June, 1957

Index for Volume XXXVIII

Beck, John M. Periodicals. 44, 108, 170, 231, 287.

Bishop, Bailey. Developing an Effective Program for 1C Classes. Lorentzen, Idah N. 77.

Blyth, Donald J. Using Beautification to Build Community Relations. 150.

Blyth, Donald J., Melnick, Curtis C., Sullivan, Lorraine M. and Zimmerman, Herbert M. Enlisting Community Support to Prevent School Vandalism. 83.

Brainer, Alexander. Tips for Teachers. 100.

Chada, Joseph. Using the Whole World as Your Textbook. 193.

Chicago's High School Curriculums. Irwin J. Suloway. 93.

Children's Readers, Examining the Content of. Philip W. Jackson. 142.

Choldin, Hannah W. Tips for Teachers. 36.

Cole, Mary. How to Evaluate Children's Art Work. 215.

Connelly, Jeanne. Tips for Teachers. 100.

Connery, Joseph J. Experimenting with Upper Grade Centers. 71.

Correlated Teaching, Measuring the Merits of. Aileen Burns Nayder. 135.

Counseling and Guidance In the Classroom. Muller, Emma Fleer, Tierney, Marie, Walchirk, Oscar, and Watson, William. 277.

Current Trends in the Chicago Public Schools. Benjamin C. Willis. 65.

Demsch, Berthold. An Experiment with Co-educational Gym Classes. 210.

Developing an Effective Program for 1C Classes. Bailey Bishop and Idah N. Lorentzen. 77.

Developing a Program for the Master Teacher. Helen L. Quinn. 23.

Etten, Mildred M. Tips for Teachers. 100.

Engelhart, Max D., Lund, Kenneth W., and Nee, Mary M. Teaching Algebra and Physics by Means of Television. 1.

Enlisting Community Support to Prevent School Vandalism. Blyth, Donald J., Melnick, Curtis C., Sullivan, Lorraine M., and Zimmerman, Herbert M. 83.

Examining the Content of Children's Readers. Philip W. Jackson. 142.

Experiment with Co-educational Gym Classes, An. Berthold Demsch. 210.

Experimenting with Upper Grade Centers. Joseph J. Connery. 71.

Field Trip Opportunities in Chicago. Karl Siewers. 10.

Geography Made Stimulating. Tips for Teachers. Margaret C. MacDonald. 36.

Ginsburg, Nathan. Making Teaching Materials with Ordinary Cameras. 89.

Graph Interpretation, Providing Practice In. Tips for Teachers. Josephine R. O'Donohue. 162.

Green, Arthur S. Study Groups Provide In-Service Training. 32.

Growing Project for First Graders, A. Roberta H. Kruchten. 219.

How to Evaluate Children's Art Work. Mary Cole. 215.

Important New Books. Edited by Louise M. Jacobs. 53, 117, 180, 241, 294.

In-Service Training, Study Groups Provide. Arthur S. Green. 32.

Jackson, Philip W. Examining the Content of Children's Readers. 142.

Jacobs, Louise M., Edited by. Important New Books. 53, 117, 180, 241, 294.

Johnson, Earl S. What Is the Teacher For? 257.

Krutchen, Roberta H. A Growing Project for First Graders. 219.

Languages, Building an Interest in. Tips for Teachers. Hannah W. Choldin. 36.

LaVigne, Lorraine. Tips for Teachers. 36, 282.

NOTE: The various issues of Volume XXXVIII were paginated as follows: September-October (1956), 1-64; November-December, 65-128; January-February (1957), 129-192; March-April, 193-256; May-June, 257-304.

Lorentzen, Idah N., and Bishop, Bailey. Developing an Effective Program for 1C Classes. 77.

Lund, Kenneth W. Engelhart, Max D., and Nee, Mary M. Teaching Algebra and Physics By Means of Television. 1.

MacDonald, Margaret C. Tips for Teachers. 36.

Making Teaching Materials with Ordinary Cameras. Nathan Ginsburg. 89.

Master Teacher, The Role is a Varied One. Zoralyn V. Salario. 29.

Master Teacher, Developing a Program for the. Helen L. Quinn. 23.

Measuring the Merits of Correlated Teaching. Aileen Burns Nayder. 135.

Melnick, Curtis C., Blyth, Donald J., Sullivan, Lorraine M., and Zimmerman, Herbert M. Enlisting Community Support to Prevent School Vandalism. 83.

Minerva, Mary Joan. An Orientation Program for New Teachers. 223.

Mullen, Frances A. Washington and Chicago Cooperate in Research. 272.

Muller, Emma Fleer, Tierney, Marie, Walchirk, Oscar, and Watson, William. Counseling and Guidance in the Classroom. 277.

Nayder, Aileen Burns. Measuring the Merits of Correlated Teaching. 135.

Nee, Mary M., Engelhart, Max D., and Lund, Kenneth D. Teaching Algebra and Physics By Means of Television. 1.

New Teaching Aids. Edited by Joseph J. Urbancek. 48, 113, 175, 236, 291.

News in Education. Edited by George J. Steiner. 39, 102, 164, 225, 284.

O'Donohue, Josephine R. Tips for Teachers. 162.

Orientation Program for New Teachers, An. Mary Joan Minerva. 223.

Periodicals, Edited by John M. Beck. 44, 108, 170, 231, 287.

Physical Education Display, Promoting Reading Through. Tips for Teachers. Mildred M. Etten. 162.

Providing Classes for Severely Retarded Children. Willie H. Scarborough. 199.

Quinn, Helen L. Developing a Program for the Master Teacher. 23.

Role of the Master Teacher is a Varied One, The. Zoralyn V. Salario. 29.

Salario, Zoralyn V. The Role of the Master Teacher is a Varied One. 29.

Scarborough, Willie H. Providing Classes for Severely Retarded Children. 199.

Schneider, Mary A. and Taylor, Marian W. What Books Are Our Children Reading? 155.

School Community Relations Through School Beautification. Donald J. Blyth. 150.

School Vandalism, Enlisting Community Support To Prevent. Donald J. Blyth, Curtis C. Melnick, Lorraine M. Sullivan, and Herbert M. Zimmerman. 83.

Science Teaching Aids. Tips for Teachers. Alexander Brainer. 100.

Shriver, Robert Sargent, Jr. A Suggested Course of Study for School Board Members, 129.

Siewers, Karl. Field Trip Opportunities in Chicago. 10.

Social Studies, Developing and Broadening Interest in. Tips for Teachers. Lorraine LaVigne. 36.

Some Editorial Jottings. Irwin J. Suloway. 99, 161.

Steiner, George J. News in Education. 39, 102, 164, 225, 284.

Student Council Elections Provide Practice in Democracy. Tips for Teachers. Lorraine LaVigne. 282.

Study Groups Provide In-Service Training. Arthur S. Green. 32.

Suggested Course of Study for Board Members. Robert Sargent Shriver, Jr. 129.

Sullivan, Lorraine M., Blyth, Donald J., Melnick, Curtis C., and Zimmerman, Herbert M. Enlisting Community Support To Prevent School Vandalism. 83.

Suloway, Irwin J. Editorial Jottings. 99, 161.

Suloway, Irwin J. Chicago's High School Curriculums. 93.

Taylor, Marian W. and Schneider, Mary A. What Books Are Our Children Reading? 155.

Television, Teaching Algebra and Physics By Means of. Max D. Engelhart, Mary M. Nee, and Kenneth W. Lund. 1.

Tierney, Marie, Muller, Emma Fleer, Walchirk, Oscar, and Watson, William. Counseling in the Classroom. 277.

NOTE: The various issues of Volume XXXVIII were paginated as follows: September-October (1956), 1-64; November-December, 65-128; January-February (1957), 129-192; March-April, 193-256; May-June, 257-304.

Tips for Teachers. 36, 100, 162, 282.

Tuominen, William, O. Tips for Teachers. 282.

Urbancek, Joseph J. New Teaching Aids. 18, 113, 175, 236, 291.

Uber, Edward J. Why Johnny Can't Become a Scientist. 265.

Using Beautification to Build School Community Relations. Donald J. Blyth. 150.

Using Student's Interests to Promote Learning. William O. Tuominen. Tips for Teachers. 282.

Using the Whole World As Your Textbook. Joseph Chada. 193.

Walchirk, Oscar, Muller, Emma Fleer, Tierney, Marie, and Watson, William. Counseling and Guidance in the Classroom. 277.

Washington and Chicago Cooperate in Research. Frances A. Mullen. 272.

Watson, William, Muller, Emma Fleer, Tierney, Marie, and Walchirk, Oscar. Counseling and Guidance In the Classroom.

What Books Are Our Children Reading? Marian W. Taylor and Mary A. Schneider. 155.

What Is the Teacher For? Earl S. Johnson. 257.

Why Johnny Can't Become a Scientist. Edward J. Uber. 265.

Willis, Benjamin C. Current Trends in the Chicago Public Schools. 65.

Writing Practice, Motivation for. Tips for Teachers. Jeanne Connelly. 100.

Zimmerman, Herbert M., Blyth, Donald J., Melnick, Curtis C., and Sullivan, Lorraine M. Enlisting Community Support to Prevent School Vandalism. 83.

NOTE: The various issues of Volume XXXVIII were paginated as follows: September-October (1956), 1-64; November-December, 65-128; January-February (1957), 129-192; March-April, 193-256; May-June, 257-304.

Educational Conferences and Conventions

June 30-July 6: Centennial Convention, National Education Association, Philadelphia, Pennsylvania.

July 1: Annual Summer Meeting, National Science Teachers Association, NEA, Philadelphia, Pennsylvania.

July 1-4: Annual Meeting, National School Public Relations Association, Philadelphia, Pennsylvania.

July 8-13: Fourth Annual Seminar, National School Public Relations Association, New York City.

August 19-24: Annual Conference, National Association of Journalism Directors, NEA, Chicago, Illinois.

October 11-12: Annual Meeting, Department of Rural Education, NEA, Denver, Colorado.

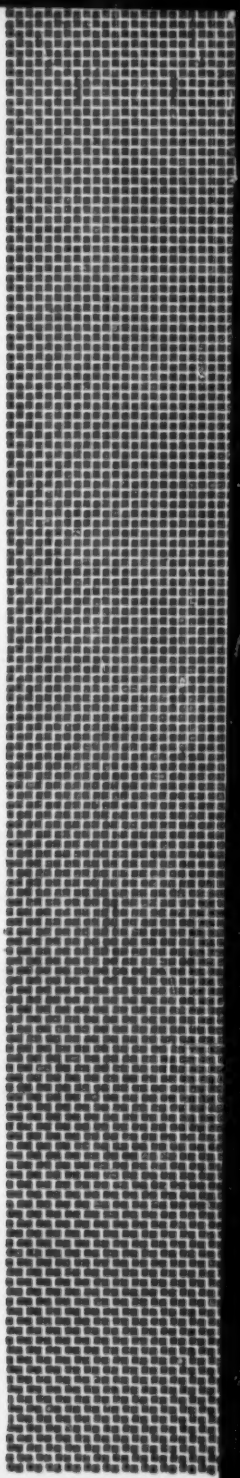
October 13-16: Twelfth National Conference, County and Rural Area Superintendents, Denver, Colorado.

October 20-24: Forty-third Annual Convention, Association of School Business Officials of the United States and Canada, New Orleans, Louisiana.

October 21-25: School and college sessions of the Forty-fifth National Safety Congress and Exposition, Chicago, Illinois.

November 3-4: Annual Meeting, Association of Urban Universities, Detroit, Michigan.

November 10-16: American Education Week.



An Educational Magazine for Chicago Teacher